Survey and Settlement
Operations,
Eastern Bengal and Assam,
Report
1905-06 to 1908-09

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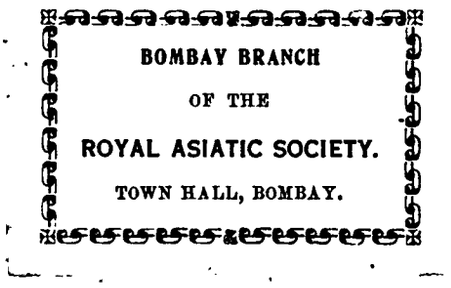

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REPORT

ON THE

SURVEY AND SETTLEMENT OPERATIONS

IN

EASTERN BENGAL AND ASSAM

FOR THE

132936

Year ending the 30th September 1906.

1907-09

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PRINTED AT THE EASTERN BENGAL AND ASSAM SECRETARIAT PRINTING OFFICE.

1907.

No. 111S. & S.—G.

FROM

J. T. RANKIN, Esq., I.C.S.,

SECRETARY TO THE BOARD OF REVENUE,

EASTERN BENGAL AND ASSAM,

To

THE CHIEF SECRETARY TO THE GOVERNMENT OF

EASTERN BENGAL AND ASSAM.

Dacca, the 22nd February 1907.

The Hon'ble Mr. H. Savage, C.S.I., I.C.S., Member in charge.

I AM directed to submit herewith for the information and orders of Government, the reports of the Superintendent of Provincial Surveys, Bengal, and the Director of Land Records, Eastern Bengal and Assam, on the survey and settlement operations in this province during the survey year ending the 30th September 1906. In consequence of previous reports in Assam having been prepared according to the revenue year ending 30th June, the Assam portion of the settlement report covers a period of fifteen months, *viz.*, from 1st July 1905 to 30th September 1906. The survey year has now been adopted for both parts of the province and in future reports this diversity will not occur.

2. The settlement report was received by the Board very late. The Director attributes the delay to the late arrival of materials from the districts: the Board trust that District Officers will endeavour in future to supply him with all the necessary informations punctually. No doubt the delay was partly due to the circumstances attending the organization of the new province but these will not recur and greater punctuality may be expected in future years.

3. The Board's remarks on the two reports are enclosed, together with a statement showing the minor settlement operations not under the control of the Director and a paragraph reviewing these operations.

I have the honour to be,

SIR,

Your most obedient Servant,

J. T. RANKIN,

Secretary to the Board of Revenue, Eastern Bengal and Assam.

Board's remarks on the Survey and Settlement Reports for the period ending 30th September 1906.

The form of the Director's report was prescribed in the correspondence noted in the margin and the maxinum limit was fixed at 25 pages, excluding the appendices. In Government letter No. 5163C., dated the 23rd May 1906, on the subject of the Land Revenue Report, it was directed that the settlement operations at present under the direct control of the Board should be included in the Director's report, but that until all settlements are placed under the Director's control, the sections dealing with them should be drafted in this office. As, however, the Director was unwilling that anything for which he was not responsible should appear above his signature, the Board have appended to this review the necessary paragraph dealing with these petty settlements.

Government Order No. 4844C., dated 17th May 1906.
Board's Order to Director, No. 87 T.—S.S., dated the 14th June 1906.
Government Order No. 7547C., dated the 21st July 1906.

The form of the report of progress made by the Superintendent, Provincial Surveys, in the operations under his charge was prescribed in Board's Order No. 95T.—S. & S., dated the 15th June 1906, and the maximum limit, excluding appendices, was fixed at 8 pages.

Both reports are due to the Board on the 1st of December and to Government with the Board's review on the 15th of January, but, owing to the Director's report being seven weeks late, the Board have been unable this year to adhere to the prescribed date.

2. In Eastern Bengal traverse survey operations are under the control of the Superintendent of Provincial Surveys, Bengal, while in Assam they are conducted by the Assam Survey Detatchment, which is under the Director of Land Records. This anomalous arrangement is very unsatisfactory. The Board are of opinion that the work in this province is of sufficient importance to justify the appointment of a separate Superintendent from the superior ranks of the Imperial Service and proposal on the subject will shortly be submitted. A recent change in procedure has divested the Survey Department in Eastern Bengal of all concern with cadastral survey and record writing which have been transferred to the Settlement Staff and the result is being carefully watched.

3. During the year a sum of Rs. 1,17,645 was expended by the Superintendent, Provincial Surveys, Bengal, of which about Rs. 87,500 was on account of traverse work, Rs. 13,500 on aceount of cadastral work, and Rs. 16,500 for maps. The main operations were the traverse survey of 1,638 square miles in the district of Dacca, on which the sum of Rs. 84,242 was spent. The cadastral work consisted chiefly of the completion of the arrears in Bakarganj at a cost of Rs. 11,515, and the greater part of the outlay on maps (*viz.*, Rs. 9,067) was spent in the preparation of the standard maps.

4. The cost of the operations in the Dacca Division amounted to Rs. 514 per square mile, against Rs. 45 originally estimated by the Government of Bengal and reported to the Government of India. The cause of this ncrease was the intricacy of the work and the difficulty experienced in the demarcation of village boundaries, due to the lack of interest on the part of zamindars and raiyats and the absence of any authority to compel their attendance. When work is resumed in this district, the Board will take steps to secure the co-operation of the Collector or else to appoint some other officer to exercise the powers of a Superintendent of Survey. The Superintendent, Provincial Surveys, Bengal, should bear this in mind when making his proposals for the future.

5. The mapping work done in Bengal Drawing Office requires some explanation. The cadastral sheets of village maps (16″=1 mile) are reproduced by the Vandyke process for attestation and correction and for distribution finally to the landlords and tenants. They are then reduced by the pentagraph and the compilation of the 2″ quarter sections of the final 1″ standard maps (reduced by photography) is made. Finally, the district maps on the scale of 1″=4 miles are prepared. For administrative proposes thana maps are also prepared from the standard sheets; and in 1903 the Board of Revenue, Lower Provinces, directed maps on the scale of 1″=1 mile showing all permanently marked trijunctions to be prepared. The map record

section of the Drawing Office receives all the maps prepared, numbers and stores them on racks and prepares the thanawar and parganawar registers. The work done during the year is described by the Superintendent, Provincial Surveys, Bengal.

6. As regards the repor tof the Director of Land Records, the Board observe that he has not strictly followed the prescribed form, but the variations are slight. The information regarding *charge* should have come into Chapter VII and not in the covering letter. Also, paragraph 5 of Chapter I should have been amalgamated with paragraph 31 of Chapter V.

7. The report is extremely interesting, embodying, as it does, Mr. Beatson Bell's views on everal important matters, more specially the maintenance of land records.

8. It is unnecessary here to detail the causes which led to the postponement of settlement operations in the districts of Dacca and Faridpur. In Bakarganj, in spite of the immense difficulties, the progress made was highly satisfactory, and in this connection the Board desire to bring prominently to the notice of Government the remarks of the Director of Land Records on the work done by Mr. Jack and his staff.

9. It may be remarked, however, that Statement I does not fully bear out the remark of the Director of Land Records in paragraph 11 of his report that the programme was completed. Statement V also does not agree with the body of the report as to the figures on account of recoveries. The discrepancies should be explained. In Statement IV (*a*) an enchancement of 108 per cent. is shown against the rental in Government estates in Noakhali : it should be reported if the principle of progressive enhancement laid down in rule 7, page 91 of the Survey and Settlement Manual, 1900, has been duly taken into consideration where necessary.

10. The result of the extension of the experiment of making field-to-field *bujharat* along with *khanapuri* in the same season (referred to in paragraph 8) should be reported with a view to its general adoption if successful.

11. Mr. Beatson Bell has not yet visited the Assam districts, and the account given by him of the survey and settlement works there is necessarily brief. The resettlement operations in Kamrup and Sibsagar were brought to a close during the period under review. A fuller account of these operations will be found in the Board's letter submitting to Government the final reports thereon. The main operations in these settlements were the revision of existing maps and records, the classification of lands and the revision of assessment on what is known as the soil unit system. As observed by the Director of the Department of Land Records, a special feature of these settlements was the arrangement made for attesting the records on the spot. The Board believe the system has worked well and has met with the approval of the tenantry.

The districts of Darrang and Nowgong are now under resettlement under the same principles. The only departure made from the past procedure is the issuing of *kutcha pattas* before attestation—a course which has been sanctioned by Government on the recommendation of the Board. The progress in both districts, the Board are glad to observe, has been satisfactory. Mr. Edwards deserves credit for being able to keep pace with the programme prepared for the district.

12. As pointed out in paragraph 2 above, it is anomalous that professional traverse work in one part of the province should be controlled by the Superintendent, Provincial Surveys, Bengal, and in another by the Director of the Department of Land Records. Equally anomalous is the position as regards the expenditure. The Government of India bear the cost in Eastern Bengal even in zamindari estates, while in Assam the whole burden is thrown upon the Provincial Government. The Board await the promised report of the Director of the Department of Land Records on the subject (*vide* paragraph 26).

13. The Board look forward with interest to receiving a report on the experiment for the maintenance of records now being conducted by Mr. Hughes Buller in Chittagong. The work will have to be carefully watched, but the Board are sanguine that it will prove a success and they hope that from this basis it will be possible to evolve a scheme which will set at rest this much vexed question for the whole province.

14. A statement showing the progress of petty settlements under the control of the Commissioners (*vide* parapraph 17) has been compiled by the Board and is attached herewith. It will be seen from it that an area of 95,125 acres in Government estates and 104,596 acres in private estates were under settlement, and that the records of 164 villages in the former and of 76 in the latter estates were finally published during the year. The expenditure amounted to Rs. 25,291 in Government estates and Rs. 22,424 in private estates.

15. The thanks of the Board are due to Major Crichton for the efficient conduct of the work under his control and to Mr. Barnes for the energy and labour he expended under difficult conditions. The Board would invite the attention of Government to the merits of the officers mentioned in the report. In selecting officers for promotion to the Provincial and Subordinate Executive Services, the Board have given due consideration to the claims of officers who have been employed on settlement work and have been specially commended for it. Their report to Government on the subject was submitted after consultation with the Director of the Department of Land Records.

J. T. RANKIN,

Secretary to the Board of Revenue, Eastern Bengal and Assam.

No. 3974—R-7.

FROM

MAJOR R. T. CRICHTON, I.A.,
SUPERINTENDENT OF PROVINCIAL SURVEYS, BENGAL,

To

THE SECRETARY TO THE BOARD OF REVENUE, EASTERN BENGAL AND ASSAM, LAND REVENUE DEPARTMENT.

Dinapur, the 13th November 1906.

SIR,

I HAVE the honour to submit the Annual Report for the survey year 1905-1906 for the survey operations in the transferred districts still under my control and for work relating to Eastern Bengal and Assam accomplished in the Bengal Drawing Office.

2. I presume my report will be incorporated with that of the Superintendent of Provincial Surveys, Assam, but in the absence of special instructions, I have given similar information to that required in the Bengal Survey Report and have supplied similar tabular statements.

3. I desire to call the attention of the Board to the excellent work done by Mr. A. W. Smart in charge of No. 6 Party and by Mr. L. F. Berkeley in charge of the Bengal Drawing Office.

I have the honour to be,

SIR,

Your most obedient Servant,

R. T. CRICHTON, *Major, I.A.*,

Superintendent of Provincial Surveys, Bengal.

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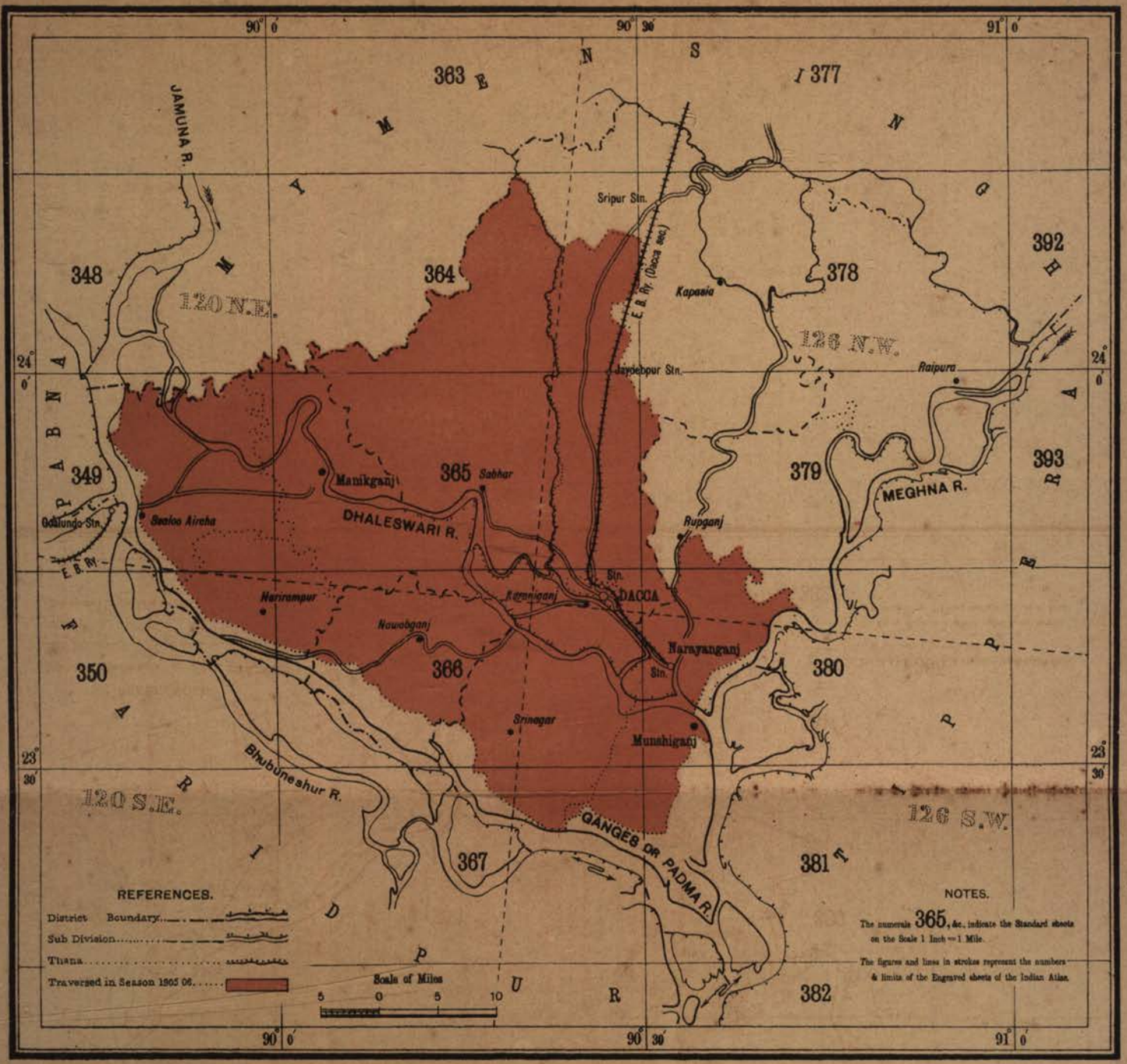
BENGAL SURVEY.

1905-06. **INDEX TO THE TRAVERSE SURVEY IN DISTRICT DACCA.** No. 6 PARTY.



No 356, Bengal.—Nov. 06.—725.

Photo. S. I. O., Calcutta.

THE ANNUAL REPORT FOR THE SURVEY YEAR 1905-1906.

DISTRICT DACCA.

TRAVERSE SURVEY.

The traverse survey of this district was ordered in Government Notification No. 2526L.R., dated the 28th September 1905.

2. The area of 1,638 square miles traversed was divided into nine main circuits and subdivided into one hundred sub-circuits which contained 3,629 villages.

3. There are 39,290 new theodolite stations marked with 6,983 stones, 6,026 galvanized iron cylinders, and 1,014 glazed earthen cylinders and 25,267 pegs.

4. There was no demarcation done, or attempted, of the village boundaries and no assistance rendered by the landlords or tenants. The receipts for station marks are more or less incomplete, and many of them were returned unsigned by the Collectorate, with a remark that the parties concerned were not aware of marks being put down, which clearly proves non-attendance. The only guide to the village boundaries was the revenue survey of 1858—1860 and where the boundaries do not follow physical features, the differences in the peripheries of the villages of the old and new surveys are great. The Survey Officers, though gazetted under the Survey Act, were not delegated with powers to enforce attendance or to impose fines, and unless this restriction is removed, close approximation to the old revenue survey is impossible.

5. Towards the middle of the field season it was found that the Settlement Department had postponed the cadastral survey of district Faridpur, and as this would delay similar operations in district Dacca for a couple of seasons, it was arranged that a proportion of the stations should be preserved. No action was necessary for village trijunctions, which have been marked with stones, but the intermediate stations, at every 30 to 40 chains apart, have been marked with galvanized iron cylinders and covered over with mounds of earth. For this work 33 squads were deputed after the close of the season, but is was found impossible to continue after the 28th June owing to the setting in of the monsoon and flooding of the country. Portions of the area therefore remain to be marked with cylinders and mounds.

6. The nature of the country, in the southern and western half of the district, is low-lying and intersected by large rivers, *khals*, and *bhils*. Towards the north and east, the country is fairly upland and partly covered by low scrub and jungle. Taken all round, the area surveyed presented many difficulties, the chief being the absence of bullock carts in the northern area for the conveyance of stones and baggage. This greatly retarded the progress of the work.

7. The recess work was exceptionally heavy, owing to the large number of villages and traverse stations. The season's work will be completed before the section takes the field, when the 16-inch plots will be made over to the Settlement Department.

8. The health of the establishment was fairly good. Malarial fever was always prevalent, and fifteen deaths occurred due to cholera and fever.

PROVINCIAL BOUNDARY OF BENGAL AND EASTERN BENGAL AND ASSAM.

TRAVERSE SURVEY.

9. The traversing of the boundary was ordered in the Director of Land Records' letter No. 1714S., dated the 13th July 1905. The districts on the Bengal side are Khulna, Jessore, and Nadia and those of Eastern Bengal and Assam are Bakarganj and Faridpur.

10. The rivers Baleshwar, Madhumati, Barasia, and Gorai form the boundary, of which the right bank was traversed and connected in fifteen places on to the work of previous seasons.

11. There are 977 stations which have been marked with 166 stones, 112 glazed earthen cylinders, and 699 pegs.

12. On the Bakarganj portion of the boundary, a field book was kept, in which offsets were recorded of the high bank, lower water mark and height of the bank from the water's edge. This was necessary, as the Bakarganj district had been completed in cadastral survey, and it will only need the transferring of the left bank of the rivers from the cadastral sheets to make the maps complete. For the portion of the boundary on district Faridpur, no offsets have been taken, as the detail survey of district Faridpur is in abeyance.

13. The work has been completed and the plots will shortly be made over to the Settlement Department.

LAND ACQUISITION SURVEY.

District Dacca.

Cadastral Survey with a record-of-rights.

14. This survey was undertaken, at the request of the Executive Engineer in charge of the Dacca Division, for the purpose of acquiring land to build Government offices and residences. The site selected was at Ramna and the area surveyed was 698 acres on a scale of 32 inches to a mile. A record-of-rights was also written.

15. The original maps and records have been completed and made over to the Executive Engineer. The cost has been paid by the Public Works Department.

REPORT ON BENGAL DRAWING OFFICE.

16. The following sections of the Bengal Drawing office have dealt with the work of Eastern Bengal and Assam :—

Standard Mapping Section.

17. The survey of the district of Bakarganj is contained in 29 standard sheets. Twenty-two of these have been commenced during the year and will be completed for publication in regular order, commencing from the north. Two of the northernmost sheets are well advanced, with village sites inked in, and names typed. The inking up of their topographical details will shortly be commenced. Five sheets have their reductions transferred on to them and the remainder are yet in the preliminary stage, with plotting done, and villages reduced by pentagraph on bank post paper. These sheets of Bakarganj are being pushed on with, in order to expedite and facilitate the preparation of thana and trijunction mark maps.

18. The central and southern sections of the Chakla Roshanabad estate of district Tippera come into 7 standard sheets which have all been commenced during the year. Two of these sheets are partially typed and the remainder, with the exception of one, which has only so far been projected, have their reductions transferred on to them.

19. The standard mapping of the northern section of this estate and of the Sarail estate also of district Tippera was undertaken by the Assam Drawing office. These sheets, two in number, of four sections each, have recently been obtained from the headquarters office, for the preparation of the trijunction mark maps of both these estates. Three of these sections have only the plotting of the village trijunctions of the northern section of the Chakla Roshanabad estate done on them as yet, and it is necessary to transfer details in connection with boundaries, main streams, roads, and railways on to them in pencil before the trijunction mark maps of this portion can be prepared. No orders have yet been received as to whether the fair mapping of this portion will be completed by this office or by the headquarters office of the Survey of India.

20. In last year's report, mention was made of the trouble experienced in completing the district map of Chittagong, owing to the difficulty of fitting the survey of 1861—1866 of the Hill Tracts on to the survey ot 1888—1893 of the cultivated portions where streams disagreed in the two surveys. It has been decided that, in the absence of a revision survey, such streams should be connected by means of broken lines and that a footnote is to be given on the map pointing out that it has been compiled from these two surveys. This district map is complete, and as soon as its separate hill sheet is ready, it will be sent for publication.

Thana and Trijunction Mark Mapping Section.

21. The remaining two thana maps of thanas Fatikchari and Mirsarai of district Chittagong have been completed during the year and 200 reproduced copies of each supplied.

22. The trijunction mark maps of the Chakla Roshanabad and Sarail estates of district Tippera have been commenced and are making satisfactory progress.

23. The thana and trijunction mark maps of district Bakarganj will be commenced early next year, as soon as the standard mapping is sufficiently advanced to admit of it. It has been decided by the Settlement Officer to adopt survey numbers instead of the thana serials on the thana and trijunction mark maps of this district and for district Faridpur as well.

Reproduction of Village Maps.

24. In the district of Bakarganj there are 2,097 sheets for tracing. Altogether 1,796 sheets were traced on 1,734 paper traces, 1,633 were examined, 1,577 were vandyked and 165,082 copies were supplied last year. The balance of 301 sheets, traced on 340 paper traces with 441 examined, 497 vandyked, and 56,612 copies supplied, has been the work accomplished during the current year.

25. Discrepancies were found in 29 villages. These were all sent for rectification and have been returned rectified by the Settlement Officer. The direct reproduction of the sheets of this district of the survey of 1903-1904 will shortly begin.

26. With reference to the reproduction of the sheets of the Jaipur Government estate, district Bogra, out of the 187 sheets of the estate which had been received from the Manager during the previous year, 148 have been traced on 144 paper traces and the balance will soon be finished, reproduced, and supplied.

27. In connection with attestation, the balance of 216 sheets, of last season's work of district Bakarganj, were reproduced and 432 coppies supplied. Forty-eight sheets only of the current season's survey of this district have been received from the Settlement Officer and 192 copies supplied.

28. This section has also reproduced for the Municipality of Dacca 8 wall maps on scale 16 inch = 1 mile, of which 200 copies of each have been supplied, and 79 town maps on scale 1 inch = 66 feet, of which 50 copies each have been supplied, making a total of 5,550 copies.

Badar Section.

29. The " badars " of 12 villages of district Bakarganj remained over for correction from last year. Those of 1,105 villages have been received during the year making the total 1,117 villages to be dealt with. The " badars " of 1,081 villages have been corrected and 36 remain.

30. Correct thana names and numbers have been entered in the traverse volumes of 956 villages and in the field books of 686 villages of district Chittagong. Also correct thana numbers have been entered on 2,094 sheets of this district, making a total to date of 3,355 cadastral sheets which completes the district in this respect.

31. In addition to its ordinary work this section has also touched up 2,834 sheets of district Bakarganj of 1903-1904 for reproduction.

Record Section.

32. During the year this section has received 3,156 original sheets of district Bakarganj and 462 of district Tippera making a total of 14,587 for this province. These have been racked, and their thanawar and parganawar registers are in course of preparation and completion. Serial numbers have been pasted on to 6,786 of these sheets during the year.

APPENDIX I—PART A.

Summary of Outturn of Work of the Survey parties in Eastern Bengal and Assam for 1905-1906.

District.	Traversing.					Cadastral survey.				Record writing.		Topographical survey.
	Number of villages.	Linear miles of new chaining.	Number of stations at which the theodolite was set up	Number of azimuths.	Number of sub-traversers.	Village.	Fields.	Linear miles of test survey.	Sheets.	Villages.	Fields.	Villages.
1	2	3	4	5	6	7	8	9	10	11	12	13
Dacca	3,629	7,240	49,444	221	1,440	...	...	...	...	...	...	...
Provincial boundary ...	...	227	977	30	...	...	...	...	...	...	...	...
Total..	3,629	7,467	50,421	251	1,440	...	...	...	...	...	...	...

APPENDIX I—PART B.

Statement of Outturn and Cost rates.

District and estate.	Description of work.	Estimated area to be dealt with, in square miles.	Year of inception of operation.	Area surveyed, in square miles.		Cost rate per square mile.		Balance of area remaining to be surveyed.	Estimated cost of completing the area in column 9.	Estimated final cost rate per square mile.	Remarks.
				During the year under report.	Total including previous years.	During the year under report.	From beginning to end of the year under report.				Explanation of unusually high expenditure.
1	2	3	4	5	6	7	8	9	10	11	12
						Rs.	Rs.	Rs.	Rs.	Rs.	
Dacca	Traverse	2,782	1,905	1,638	1,638	*514	514	1,144	46,000	46·8	High rate owing to very small village and defective demarcation.
Faridpur...	Ditto	2,281	1,904	....	1,893	*	465	388	15,495	45·4	* Expenditure incurred on arrears only.
Total and average of columns 7, 8 and 11	Ditto	5,063	...	1,638	3,531	51·4	48·8	1,532	61,495	46·2	

APPENDIX II.

Statement of Sums expended.

District, etc.	Description of work.	Expenditure incurred during the year under report.				Total expenditure from inception to end of the year under report.			
		Actual (direct) cost.	Share of Superintendent, Provincial Surveys' pay and cost of his office.	4 per cent charge for instruments.	Total.	Actual (direct) cost	Share of Superintendent, Provincial Surveys' pay and cost of his office.	4 per cent. charge for instruments.	Total.
1	2	3	4	5	6	7	8	9	10
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs	Rs.
Dacca	Traverse	76,927		3,240	84,242	76,927	4,075	3,240	84,242
Bakarganj-Faridpur—Provincial boundary ...	,,	535	28	23	586	535	28	23	586
Dacca—Land acquisition survey	,,	551	29	23	603	551	29	23	603
Faridpur—Arrears	,,	1,922	102	81	2,105	81,260	3,440	3,388	88,088
Jalpaiguri—Apalchand forest demarcation ...	,,	105	5	4	114	105	5	4	114
Ditto—Cooch Bihar Boundary Arrears ...	,,	31	2	1	34	3,065	129	127	3,321
Malda—Mauza Ghora Pakhia ...	,,	131	7	5	143	819	35	33	887
	Cadastral ...	395	21	16	432	491	25	20	536
Training of Settlement Staff	,,	1,386	73	58	1,517	1,386	73	58	1,517
Bakarganj Arrears	,,	10,515	557	443	11,515	10,515	557	443	11,515
Total	Traverse... ...	80,202	4,248	3,377	87,827	1,63,262	7,741	6,838	1,77,841
	Cadastral ...	12,296	651	517	13,464	12,302	655	521	13,568
Bengal Drawing Office — Standard maps ...		8,611	456	...	9,067	8,611	456	...	9,067
Thana maps ...		64	339	...	403	64	339	...	403
Reproduction, Bakarganj		4,365	231	...	4,596	4,365	231	...	4,596
Badar Section ...		1,283	68	...	1,351	1,283	68	...	1,351
District maps ...		142	7	...	149	142	7	...	149
Reproduction, Bogra maps		104	5	...	109	104	5	...	109
Bakarganj attestation maps		277	14	...	291	277	14	...	291
Reproduction Dacca City maps		369	19	...	388	369	19	...	388
Grant total		1,07,713	6,038	84	1,17,645	1,90,869	9,535	7,359	2,07,763

R. T. CRICHTON, MAJOR, I.A.,

Superintendent of Provincial Surveys, Bengal.

EASTERN BENGAL.

APPEN

Showing progress made in smaller Settlements under the Bengal Tenancy Act, under the

Division.	District.	Estimated area in acres under settlement of revenue or rents.	Total number of villages.	Area surveyed in acres.			Number of villages in which records have been prepared for attestation.		Number of villages in which attestation has been completed.	
				Up to the end of the preceding year.	During the year under report.	Total area surveyed.	Up to the end of the preceding year.	During the year under report.	Up to the end of the preceding year.	During the year under report.
1	2	3	4	5	6	7	8	9	10	11
	Government Estates.									
Dacca	Dacca	11,517	35	3,480	23	3,503	19	3	19	3
	Mymensingh	46,053	13	46,053	...	46,053	13	...	2	9
	Faridpur	...	...	...	...	...	...	...	...	...
	Bakarganj	...	...	...	...	...	...	...	...	...
	Total	57,570	48	49,533	23	49,556	32	3	21	12
Chittagong	Tippera	28,806	179	28,806	...	28,806	179	...	179	...
	Total	28,806	179	28,806	...	28,806	179	...	179	...
Rajshahi	Pabna	8,749	1	8,749	...	8,749	1	...	1	...
	Total	8,749	1	8,749	...	8,749	1	...	1	...
	Grand Total	95,125	228	87,088	23	87,111	212	3	201	12

APPEN

Showing progress made in smaller settlements under the Bengal Tenancy Act, under the

Division.	District.	Estimated area in acres under settlement of revenue or rents.	Total number of villages.	Area surveyed, in acres.			Number of villages in which records have been prepared for attestation.		Number of villages in which attestation has been completed.	
				Up to the end of the preceding year.	During the year under report.	Total area surveyed.	Up to the end of the preceding year.	During the year under report.	Up to the end of the preceding year.	During the year under report.
1	2	3	4	5	6	7	8	9	10	11
	Private Estates.									
Dacca	Dacca	22,977	103	26,334	...	26,334	96	...	96	...
	Mymensingh	25,382	49	23,872	930	25,382	34	15	8	15
	Faridpur	940	27	933	...	933	27	...	27	...
	Total	49,299	179	51,139	930	52,649	157	15	126	15
Chittagong	Tippera	24,166	80	24,166	...	24,166	80	...	80	...
	Total	24,166	80	24,166	...	24,166	80	...	80	...
Rajshahi	Dinajpur	18,777	67 and 48 chits.	12,788	6,447	19,235	29 and 42 chits.	38 and 6 chits.	29 and 42 chits.	...
	Bogra	270	1	270	...	270	1	...	1	...
	Pabna	12,084	8	10,841	1,243	12,084	7	1	7	...
	Total	31,131	76 and 48 chits.	23,899	7,690	31,589	37 and 42 chits.	39 and 6 chits.	37 and 42 chits.	...
	Grand total	104,596	335 and 48 chits.	99,204	8,620	108,404	274 and 42 chits.	54 and 6 chits.	248 and 42 chits.	

DIX Ic (*i*).

supervision of the Commissioners of Divisions during the year ending the 30*th September* 1906.

Number of villages in which the record-of-rights has been draft published under the Bengal Tenancy Act.		Number of villages in which the record-of-rights has been finally published under the Bengal Tenancy Act.		Estimated number of tenants in the villages in column 4.	Number of tenants whose rents have been recorded and status determined in khatians finally published under the Tenancy Act.			Cost during the year.			Remarks.
Up to the end of the preceding year.	During the year under report.	Up to the end of the preceding year.	During the year under report.		Up to the end of the preceding year.	During the year under report.	Total of columns 17 and 18.	Survey.	Settlement.	Total.	
12	13	14	15	16	17	18	19	20	21	22	23
19	3	4	18	1,032	203	1,126	1,329	Rs. a. p. 469 8 0	Rs. a. p. 8,057 4 2*	Rs. a. p. 8,652 1 0	* Includes cost of private estates.
2	1	...	...	...	...	...	...	3,250 0 0	5,575 0 0	8,825 0 0	
...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	
21	4	4	18	1,032	203	1,126	1,329	3,719 8 0	13,632 4 2	17,477 1 0	
175	...	29	146	10,123	6,751	3,372	10,123	...	7,599 0 0	7,599 0 0	
175	...	29	146	10,123	6,751	3,372	10,123	...	7,599 0 0	7,599 0 0	
1	...	1	...	2,124	2,124	...	2,124	...	215 3 3	215 3 3	
1	...	1	...	2,124	2,124	...	2,124	...	215 3 3	215 3 3	
197	4	34	164	13,279	9,078	4,498	13,576	3,719 8 0	21,446 7 5	25,291 4 3	

DIX Ic (*ii*).

supervision of the Commissioners of Divisions during the year ending the 30*th September* 1906.

Number of villages in which the record-of-rights has been draft published under the Bengal Tenancy Act.		Number of villages in which the record-of-rights has been finally published under the Bengal Tenancy Act.		Estimated number of tenants in the villages in column 4.	Number of tenants whose rents have been recorded and status determined in khatians finally published under the Tenancy Act.			Cost during the year.			Remarks.
Up to the end of the preceding year.	During the year under report.	Up to the end of the preceding year.	During the year under year.		Up to the end of the preceding year.	During the year under report.	Total of columns 17 and 18.	Survey.	Settlement.	Total.	
12	13	14	15	16	17	18	19	20	21	22	23
								Rs. a. p.	Rs.	Rs.	
96	...	89	7	6,831	3,680	4,445	8,125	125 4 10	...	...	
3	...	1	2	3,726	...	504	504	234 0 0	5,560	5,794	
25	2	25	2	481	...	481	481	171 0 0	650	821	
124	2	115	11	11,038	3,680	5,430	9,110	530 4 10	6,210	6,615	
80	...	17	63	8,247	402	3,891	4,293	...	10,301	10,301	
80	...	17	63	8,247	402	3,891	4,293	...	10,301	10,301	
29 and 42 chits.	...	27 and 40 chits.	2 and 2 chits.	4,794	2,833	534	3,367	2,280 0 0	2,245	4,525	
1	...	1	...	430	430	...	430	...	40	40	
7	...	6	...	3,769	3,331	...	3,331	293 0 0	650	943	
37 and 42 chits.	...	34 and 40 chits.	2 and 2 chits.	8,993	6,594	534	7,128	2,563 0 0	2,035	5,508	
241 and 42 chits.	2	166 and 40 chits.	76 and 2 chits.	28,278	10,676	9,855	20,531	3,103 4 10	19,446	22,424	

J. T. RANKIN,

Secretary to the Board of Revenue, Eastern Bengal and Assam.

No. 2T.S.

FROM

N. D. BEATSON BELL, Esq., C.I.E., I.C.S.,
DIRECTOR OF LAND RECORDS AND AGRICULTURE,
EASTERN BENGAL AND ASSAM,

To

THE SECRETARY TO THE BOARD OF REVENUE,
EASTERN BENGAL AND ASSAM.

Shillong, the 19*th January* 1907.

SIR,

I HAVE the honour to submit a report on the survey and settlement operations in this province during the period ending 30th September 1906. In the case of the transferred districts the report deals with 12 months, and in the case of the Assam districts with 15 months. In future years the report will deal with 12 months throughout the province. In the case of the transferred districts, I was in charge of the operations only for a fortnight, during which time I was ill; for the remaining period Mr. Barnes was in charge. In the case of the Assam districts, Mr. Barnes was in charge throughout the entire period under report. I can therefore write with no first-hand knowledge of the matters dealt with, and I shall be as brief as possible. This report was due to you on 1st December, but owing to the late arrival of materials from some districts, particularly in regard to mutations in Government estates, I regret that the report will reach you about seven weeks late.

I have the honour to be,

SIR,

Your most obedient Servant,

N. D. BEATSON BELL,
Director of Land Records and Agriculture,
Eastern Bengal and Assam.

Report on the survey and settlement operations in the Province of Eastern Bengal and Assam for the period ending 30th September 1906.

CHAPTER I.

GENERAL SUMMARY.

1. In the transferred districts the main work lay in Bakarganj and Faridpur, in both of which disiricts the preparation of a complete survey and records-of-rights has been ordered. At the time of the partition the field work in Bakarganj was already approaching completion and it was practically finished during the year under report. In Faridpur, on the other hand, a considerable area had been traversed before the partition, but no further progress had been made. The settlement staff intended to undertake field work in the first block of this traversed area during the year under report but owing to a rapid series of events, political and otherwise, it was decided to postpone this work for a year. It is now in full progress.

2. In addition to the main work in Barkarganj and Faridpur, minor operations under the control of the Director were in progress in Tippera, Noakhali, Rangpur and Pabna. In all of these districts the work advanced through several stages.

3. As the work still remained in progress in the main district operations, no completion reports for such operations were submitted during the year. In the case of certain individual estates final reports in connection with the assessment of land revenue were, however, submitted. They call for no special mention here.

4. Turning to the Assam districts, the survey and settlement operations in Kamrup and Sibsagar were wound up and the final reports were submitted during the period under review. In Darrang and Nowgong the whole districts were under settlement, and the work made considerable advance in both districts. Minor operations were also in progress in Lakhimpur, Sylhet, and Cachar. Apart from this, "extension surveys" were carried out by the district staff throughout the province.

5. In the transferred districts the record was maintained in a more or less desultory manner in Government and wards estates. A scheme is now being worked out for the maintenance of the district record in Chittagong. In the Assam districts a regular staff is kept up for the purpose of maintaining the record. This staff is under the supervision of the Director of Land Records.

6. The operations in Bakarganj and Faridpur were jointly under the control of a civilian Settlement Officer, with a civilian under-study, and a staff of Assistant Settlement Officers. In Darrang and Nowgong there were civilian Settlement Officers each with a staff of Assistant Settlement Officers. In the other settlements the *personnel* consisted entirely of officers of the Provincial and Subordinate Executive Services. In the transferred districts, however, some of the Assistant Settlement Officers were not even in the Subordinate Executive Service. They were officers specially selected from the ranks of kanungos and vested by Government with powers of Revenue officers. They are reported to have done excellent work, and I trust that their claims to promotion into the ranks of the regular service are not being overlooked. During the period under report the maximum number of officers employed exclusively upon settlement duty in the two portions of the province was as follows :—

—	Civilians.	Deputy Collectors.	Sub-Deputy Collectors.	Others.	Total.
1	2	3	4	5	6
In transferred districts ...	5	6	11	25	47
In Assam	2	2	4	...	8
Total	7	8	15	25	55

7. During the period under report the control of cadastral survey and and *khanapuri* passed in the transferred districts from the Survey Department to the Settlement Department. The new system is reported to have worked well.

8. The new system mentioned in last paragraph placed a large staff of men at the disposal of the Settlement Officer. He utilised the staff in carrying out attestation in the same season as *khanapuri*. A notable feature of this attestation was the "field-to-field *bujharat*" by the Settlement kanungos. It is intended to continue this experiment in a larger scale in the current season.

9. Several Munsifs were deputed to the settlement staff in the year under report and worked as Assistant Settlement Officer in the Bakarganj settlement. The object in view was to give members of the Judicial Service an opportunity of becoming throughly familiar with the details of settlement procedure and the nature of settlement records. It has been suggested that a better way of attaining this object would be to depute the Munsifs to a course of settlement training, such as young civilians now pass through. The matter is under consideration and will be finally decided in consultation with the Honourable High Court. In the present season the deputation of Munsifs has been kept in abeyance.

CHAPTER II.

SURVEYS NOT UNDERTAKEN WITH A VIEW TO SETTLEMENT PROCEEDINGS.

10. No surveys of this kind were under the control of the Director in the period under review.

CHAPTER III.

SURVEYS AND SETTLEMENTS IN THE TRANSFERRED DISTRICTS.

I.—Operations under the Tenancy Act.

11. *Bakarganj district.*—Some portions of the district had been fully dealt with before the present operations began. These areas have been "excluded," as also the estate of Sapleja in which the proprietors (Mr. Justice Casperasz and others) had already made a private survey and record-of-rights. The remaining area covers 3,258 square miles comprised in 3,049 villages. This is the area now being dealt with. The main out-door programme for the year under review consisted in cadastral survey of 94 square miles, *khanapuri* of 469 square miles, and attestation of 1,421 square miles. This formidable programme was completed in spite of enromous difficulties. The work lay in the south of the district near the Bay of Bengal and the staff had to contend with storms, wild beasts, want of water, and want of supplies. They stuck doggedly to their work throughout the summer and throughout the rains, and finally finished it just before the puja vacation. In addition to physical and climatic difficulties, the staff had to contend with violent political opposition from the discontented section of the populace. Isolated settlement camps presented a ready target for those who were trying to make all administration impossible. Determined attempts were made to boycott the camps and to stop all attendance. Tact and firmness, however, prevailed, and the work was ultimately allowed to progress. Later on in the season scarcity broke out in the district and the brunt again fell on the settlement staff. The Settlement Officer and many of his assistants had to cope with famine operations, sometimes as whole-time officers and some times in addition to their own duties. That the field programme of survey and settlement was carried out in spite of all these difficulties, speaks volumes for the grit of Mr. Jack and his staff. He specially mentions the work done in the Sunderbans by Mr. Milligan and Mr. Hodson, and I have much pleasure in bringing their names to notice. It had been hoped that objections under section 103A would be disposed of in addition to the attestation above mentioned; but the advent of famine work rendered this impossible, and the bulk of the objections were postponed till the current year. Good progress was made in the settlement of land revenue. The estates disposed of within the year show an increase of land revenue amounting to Rs. 10,000. Several reforms were carried out in the office procedure, and there was a good outturn in that branch of work in spite of a "strike" among the employés. The strike was of course an off-shoot of the political agitation. Mr. Jack dealt with it with his usual vigour and tact, and completely overcame the resistance. The recovery of costs was postponed in view of the scarcity which visited the district. A sum of Rs. 33,558 was, however, realised in the early part of the season. The total recoveries up to 30th September 1906 amounted to Rs. 1,84,941. Costs were hitherto levied at 1 anna in the rupee on the rent of each raiyat, and $2\frac{1}{2}$ annas in the rupee on the rent of each tenure-holder. It is now proposed to raise the latter to 3 annas in the rupee. Mr. Jack was in charge of Bakarganj settlement throughout the year. Mr. Tindall was Assistant Settlement Officer from 28th October 1905 to 3rd January 1906, and Mr. Milligan from 19th October 1905 to 19th June 1906. The staff of Assistant Settlement Officers ranged from 12 to 29 at different times of the year. The

settlement veteran, Babu Pyari Mohan Basu, continued to perform the duties of head-quarters Assistant Settlement Officer. On 1st January 1906 he received from Government the well-earned title of Rai Bahadur.

12. *Faridpur district.*—This whole district has been notified for a survey and record-of-rights. The district consists of about 2,400 square miles, of which 1,750 had already been traversed before the year under report. It was proposed to take up the first block for cadastral survey, *khanapuri*, and attestatation, and the staff had actually been collected. The inception of the work was, however, postponed for a season.

13. *Tippera.*—A good deal of this district has already been surveyed and settled under the Tenancy Act—notably the estate of Chakla Roshnabad, dealt with by Mr. Cumming some 10 or 12 years ago. Mr. Cumming's very successful work popularised such operations in the district, and for a good many years past Babu Romesh Chandra Dutt has been working in the district as Settlement Officer, both upon private estates and Government estates. During the year under review he was working at the concluding stages of 38 square miles of the former class and 45 square miles of the latter class. The work was completed and the Settlement Office closed towards the end of the year. He has recently submitted a very interesting final report on the Patikara Wards estate. The Settlement Officer settled fair rents for 3,891 tenants in private estates. He also settled land revenue in 47 Government estates, and secured an increase to Government of nearly Rs. 6,000. In private estates he recovered costs to the amount of Rs. 6,829 out of a demand of Rs. 7,109. Babu Romesh Chandra Dutt was Settlement Officer throughout the year, assisted by Babu Sukumar Sen as an "outsider" Assistant Settlement Officer. The Settlement Officer has done good work in the district. He was formerly in the Behar settlements.

14. *Noakhali.*—This district, which borders upon Tippera and upon the surveyed district of Chittagong, has also been the scene of survey and settlement operations for some years past. In the year under report settlements with a view to land revenue were going on in 32 square miles, and records-of-rights were being prepared for private estates in 64 square miles. The work was going on at all stages, and it is difficult to give a clear resumé of it in a short space. It has been made more complicated by the fact that the landlords in Sandip, the chief private estate which is being dealt with, prefer that the work should be taken up bit by bit. During the year under report 13 square miles were cadastrally surveyed, 52 square miles were attested, and 41 square miles were finally published. In estates under settlement of land revenue the Assistant Settlement Officer raised rents from Rs. 21,400 to Rs. 44,580, the increase being chiefly due to increased area. In private estates he settled fair rents for 141 tenancies. As a result, the rent was raised from Rs. 996 to Rs 1,088. The proceedings will continue for several years in Noakhali. Throughout the year under report Babu Sarat Chandra Basu was Assistant Settlement Officer in charge of the operations. He was assisted by Babu Upendra Mohan Basu, an "outsider" Assistant Settlement Officer, from 2nd November to 31st March. The settlement work of Noakhali is scattered and troublesome, but it appears to have been successfully dealt with.

15. *Rangpur.*—In this district four private estates were being dealt with. The total area concerned was about 109 square miles. In all four estates the work was in its later stages. Little remained to be done at the close of the year except some case work, the recovery (if any) of costs, and the submission of the final reports. The attestation of 217 villages was completed during the year under report. This finished the attestation programme. The records of these 217 villages were finally published within the year, as also were the records of 95 villages which had previously been attested. Syed Izhar Hossain, Deputy Collector, was Settlement Officer during the year. He is to be congratulated on pushing through the work in a vigorous manner. He had temporary assistance from two outsider Assistant Settlement Officers.

16. *Pabna.*—The only estate under the control of the Director is a small estate of between 2 and 3 square miles, known as Mirkutia Digar. It was brought under the operations of Chapter X of the Tenancy Act in order to decide a rather bitter rent dispute which was taking place between the tenants and the Nawab of Dacca. During the year under report the work only reached the stage of *khanapuri*. The main difficulty of the settlement, namely, the rent dispute, therefore falls within the current year. The work was in charge of Deputy Collector Saad Abul Fazail.

II.—Operations under Laws other than the Bengal Tenancy Act.

17. These operations were under the control of the Divisional Commissioners. They have submitted their reports direct to the Board of Revenue.

CHAPTER IV

SURVEYS AND SETTLEMENTS IN THE ASSAM DISTRICTS.

18. *Kamrup.*—The re-settlement of Kamrup district, initiated in October 1902, was wound up in January 1906. The area brought under settlement was about 360 square miles of land and river, exclusive of waste land and tea grants. The resettlement proceedings resulted in a loss of revenue to the extent of 2·36 per cent. as compared with the demand (*khiraj* and *nisf-khiraj*) in the year immediately preceding the inception of the settlement. In consonance with the declared policy of Government, the object aimed at was not so much to enhance the revenue, as to remove the inequalities which admittedly existed in the incidence of assessment and to stimulate reclamation by the offer of waste lands at remunerative rates. The "soil unit" system was the basis of the assessment. The total cost of the operations came up to Rs. 1,49,700. Mr. J. McSwiney took over charge of the Kamrup settlement in April 1905 and he held it till the submission of the final report. He had a staff of three Assistants, two of whom were Extra Assistant Commissioners and one a Sub-Deputy Collector.

19. *Sibsagar.*—The resettlement of the Sibsagar district, begun in 1902-1903, was concluded early in the period under report. The area dealt with was 4,500 square miles, exclusive of town lands and tea grants, which did not come within the scope of the operations. An increase of revenue to the extent of Rs. 76,684 (6·35 per cent.) was obtained over the demand as it stood in the year preceding the settlement. A special feature of the Sibsagar settlement was the arrangement made for recording the results of attestation on the spot—much on the same lines as the "field-to-field *bujharat*" which was tried in Bakarganj.

Mr. S. G. Hart, I.C.S., was in charge of the operations from the beginning of the period under review till the 18th November 1905. He wrote the final report and went on furlough, leaving his Assistant, Srijut Radha Kanta Handiqui, to finish the distribution of patt's.

20. *Nowgong.*—The settlement of the Nowgong district was started in November 1905, but the actual work did not begin till late in December, the interval being occupied in preliminary arrangements. The non-cadastral area being of limited extent, no interior survey on a large scale was necessary. Maps and records of all the 847 permanent villages comprised in the district were corrected and brought up to date. The first group of 140 villages passed through the two further stages of classification and attestation, and the rate report was sent to the Secretariat Press early in September, preliminary to its final submission to the Director. In addition to the above, the year's work consisted of the "extension" survey of 18 villages (18,865 *bighas*). The Settlement Officer has kept pace with the programme and expects to finish the assessment of the whole district within the allotted time (three years). Both in this and the Darrang Settlement, an important departure was made from past procedure in that "*kutcha pattas*" were issued to the raiyats in advance in order to enable them to be ready with their objections when attestation began. The raiyats seemed to appreciate the benefits of this procedure. Mr. A. R. Edwards, I.C.S., held charge of the settlement throughout the year. He started work with a staff of two assistants which was afterwards raised to three.

21. *Darrang.*—The settlement of Darrang district was initiated in November 1905, but actual field work did not begin till about the middle of December. An area of 51 square miles was surveyed under the "extension" system, in view of the present settlement proceedings. The correction of maps and records was finished in 764 out of the 1,347 villages comprised in the district. The first assessment group was formed with 94 established villages which were all classified and attested before the recess. The field work accomplished was slightly behind the programme. The percentage of correction which had to be made in the field was heavy (50 per cent.), and as some of the mandals were taken away for enquiries into the damage caused by floods, progress was delayed. The superior staff consisted of Mr. J. McSwiney, I.C.S., Settlement Officer, and two assistants, supplemented by a third later on in the year.

22. *Surma Vally.*—In the Cachar district certain disforested tracts and 58 *jangalburi* mahals were settled, and proposals for the assessment of two other *jungalburi* were mahals submitted. In the Sylhet district, an area of about 2 square miles, made up of the Baniachung tanks, was surveyed with a view to a revenue settlement, which is now awaiting sanction.

23. *Extension Survey.*—The total area under extension survey in Assam was 201 square miles, about one half of which lay in the Lakhimpur district, where one Sub-Deputy Collector was exclusively employed on this work. The work done fell short of the programme by only 14 square miles.

24. *Traverse Survey.*—The Assam survey detachment completed the traverse circuit of 136 square miles in the Darrang and Lakhimpur districts, in addition to the linear survey of 656 miles intended to provide points of connection between scattered villages. During the period under review, the Government of India withdrew its contribution towards the cost of this detachment, on the ground that no important topographical or other survey work of imperial interest was now going on in Assam. The result has been that the whole charge of traverse survey in Assam proper has been thrown on Provincial revenues.

25. *Survey Staff in Assam.*—Mr. P. Shaw, Superintendent of Provincial Surveys, Assam, tested the maps and records of 38 villages, conducted the Provincial Survey School Examination held at Jorhat for the grant of first-class certificates, supervised the survey training of junior civilians and other executive officers deputed to the camp at Helem, examined two pleaders to test their knowledge of surveying and enquired into two disputed tea-grant cases. He was transferred in May last. He has been replaced by Babu Abinas Chandra Bose, an officer of lower grade, who, as Traverse Assistant to the Director of Land Records, will superintend the professional survey operations of Assam.

26. In view of the changed condition of affairs consequent on the partition, I think the time has arrived for a reconsideration of the survey arrangements of the province as a whole. I am addressing the Board on this subject while submitting my quinqennial forecast.

CHAPTER V.

LAND RECORDS.

I.—Maintenance of the Records and utilization of the Records in the transferred districts.

27. The total area of the transferred districts is about 38,000 square miles, consisting roughly of 34,000 square miles of estates permanently settled and 4,000 square miles of estates not permanently settled. Records-of-rights have already been finally published under Chapter X of the Bengal Tenancy Act in respect of about 5,000 square miles of estate permanently settled and about 2,500 square miles of estates not permanently settled. In the case of estates not permanently settled the record-of-rights was generally prepared as a preliminary to the revision of land revenue. In the case of estates permanently settled the record was sometimes prepared upon the application of the landlords concerned, soemtimes as a sequence of the assumption of management by the Court of Wards, and sometimes on the motion of Government with a view to put an end to agrarian trouble.

28. It is now the settled policy of Government to prepare an initial record-of-rights, not only where land revenue is about to be revised, but throughout the entire permanently-settled area of the province. This initial record-of-rights in the transferred area will, when completed, present an aspect totally different from similar documents in other parts of India. No less than 90 per cent. of its contents will consist of entries regarding a tract in which Government is precluded from revising the land revenue. In other parts of India the record-of-rights is invariably associated with the demand of land revenue, and the policy of keeping the inital record up to date by a process of annual revision has been readily adopted there as a natural concomitant of the prevailing fiscal system. After much debate it has been finally decided by the Government of India that in this province all records-of-rights prepared under the Bengal Tenancy Act, whether in permanently-settled areas or elsewhere, must be kept up to date. Thorughout the preliminary discussion the Revenue officers of Bengal have shrunk, as a rule, from recommending the policy which has ultimately been adopted. Even in estates under direct management most of them have hitherto considered it sufficient that a fresh record should be prepared when the time comes round for a fresh settlement of land revenue ; while in regard to permanently-settled estates the idea of an annual revision of the record has been still more distasteful to them. In their opinion up to now the land should have rest between the time when one record is prepared and the time when the next record, if any, is prepared. They have hitherto looked on the record-of-rights as the people of England have looked on the "Doomsday Book"—a document to be preserved with the utmost care and to be referred to in all cases of dispute, but on no account to be amended or modernised. It cannot be denied that this view is in many respects a broad and statesmanlike view. The other side of the question has, however, never been lost sight of, even by the most conservative of Bengal officers, and the decision of the Government will of course

be loyally carried out. We fully recognise that the absence of a "land records" establishment working from year to year in every village of the province, has deprived us of a valuable source of economic information and of ready channel of intercourse between ourselves and the cultivators. We recognise also the paramount importance of securing the very best land records establishment which can be obtained, so that it shall be a blessing and not a curse to the people.

29. Mr. Hughes-Buller is now making special enquiries in Chittagong with a view to elaborate a scheme for maintaining the record in that district. As the scheme which he works out will probably be taken as a model for similar schemes throughout the transferred districts, the importance of his enquiries can hardly be exaggerated. In making our experiment in Chittagong we shall have the great advantage of seeing, step by step, the result of a similar experiment which the Bengal Government, working a year or two in advance of us, is making in Orissa.

30. The remarks in the preceding three paragraphs are somewhat of a general nature, but it is well that we should realise clearly how we stand. Not only will an initial record-of-rights be prepared throughout the whole of the transferred districts, but every year a trained village official, supervised by an expert staff of superior officers, will overhaul that record and bring it up to date. Every acre of land, every relationship of landlord and tenant, will be subject to a yearly scrutiny. It will be no longer possible for a strong man to filch land from a weak, no longer possible for a landlord to enhance rent illegally, no longer possible for a tenant to hold land surreptitiously without payment of rent. In fact, a new land-policy has been deliberately adopted which vitally affects the daily life and happiness of 22 millions of people. This is a matter of infinitely greater importance than the partition question or the *swadeshi* movement. It is probably the most important decision which has been arrived at since Lord Cornwallis decided to make a permanent settlement. And hardly any one seems to know about it, and no one at all seems to care about it.

31. While the main question was still under discussion rules of a somewhat tentative nature were drawn up by the Bengal Government for the maintenance of the records in wards estates and Government estates under direct management. These rules are concealed in Appendix M of the Survey and Settlement Manual. The weak point of these rules is that the collection staff is called on to maintain the record in addition to its own duties. As the time of the year when the most valuable field-to-field enquiries can be made is also the time of the year when the bulk of the collections have to be made, the rules have not been altogether a success. There can be no real maintenance of the record without a *bonâ fide* viliage agency. Figures, such as they are, for the working of the rules of Appendix M will be found in Statements VII to X annexed to this report. The figures do not pretend to be complete, but they will repay perusal. It is evident that the number of mutations brought to light has varied directly with the extent to which the District Officer has worried his collecting staff during the particular year. For instance, in the 5,000 odd tenancies of the Government estates of Tippera, only 2 per cent. of mutations have been unearthed this year, while in the 12,000 odd tenancies of a wards estate in the neighbouring district of Bakarganj 17 per cent. of mutations have been discovered. Then, again, although the right to sell raiyati interests is, I believe, generally conceded throughout the Government estates of the province, very strange variations in the price realised are apparent in the figures supplied. In 178 sales in the Government estates of Noakhali 5,162 acres were transferred at an average price of only Rs. 22 per acre; but when we turn to Bakarganj, on the one side, we find that in the Government estate of Tushkhali there were 208 sales covering 2,614 acres and resulting in an average price of Rs. 125 per acre; while if we look at Fraidpur, on the other side, we find 139 sales covering 306 acres and resulting in enormous average price of Rs. 660 per acre. If only one or two transactions had been brought to light in each case, the figures would have called for little comment, but in every case the average has been worked out from quite a large number of cases. In the wards estates we have unfortunately only two sets of figures before us, the Dakhin Shahbazpur estate of Bakarganj and the Churaman estate of Dinajpur. The districts are of course wide apart, but it is strange at first sight that the 1,400 acres sold in Churaman realised only Rs. 8 per acre, while the 3,493 acres sold in Dakhin Shahbazpur realised Rs. 100 per acre. I do not profess to give any explanation of these figures, although systematic local enquiries would no doubt throw light on the problems. For the present I can only say that the figures give food for economic reflection and foreshadow the interesting information which will be at our disposal when we have a real system for maintaining the record.

32. As regards the utilization of the records in the daily work of administration, I regret that I have not much to report. The note which Mr. Hare drew up when he

was Collector of Muzaffarpur is still the basis of good advice to District Officers. In the reports before me most of the Collectors in whose districts records-of-rights have been prepared, state in general terms that the records are referred to when necessary and afford great help in the decision of disputes. I have also ascertained by personal inspection of the Registration office at Chittagong that the instructions issued by the Registration Department for the entry of a reference to the records-of-rights in all deeds presented for registration are by no means a dead letter ; although it is very interesting to find that the parties still enter wherever possible a reference to an old survey of 1837 in addition to a reference to the recent record.

33. Probably the two most pregnant facts in the situation regarding the utilization of the record in the transferred districts are that in Bakarganj district every tenant is being presented not only with an extract from the record but with a "vandyked" copy of the village map which he can file as occasion requires before any criminal, civil or revenue court ; and that Mr. Jack is now elaborating a scheme for printing the record in handy book form and distributing copies of the work to all courts and (at a trifling payment, to landlords, tenants) and bar-libraries.

II.—Land Records Work in Assam.

(*a*) *Mandals and Patwaris.*

34. Out of 1,130 mandals sanctioned for Assam, 1,123 were actually entertained. The number of uncertificated mandals has been reduced to 33. The average area of a mandal's circle in the Assam Valley is 30,325 *bighas*, that of patwari's circle in the Jaintia parganas and Cachar 20,380 and 21,750 *bighas*, respectively. In accordance with Government orders on the subject, attempts were made to eliminate non-resident mandals, with the result that their number has gone down to 498, against 685 in the previous year.

(*b*) *Survey Schools.*

35. Three Survey Schools were maintained at Gauhati, Dibrugarh, and Jorhat, mainly with a view to train mandals and patwaris. The Jorhat school has been removed to Silchar since the close of the year. Pupils to the number of 30 passed successfully out of the different schools, 4 of the successful candidates receiving first-class certificates. There was a falling of in the receipts in all the schools, due to a liberal grant of free studentships to people of backward localities in order to enable them to qualify as resident mandals.

(*c*) *Tours and inspections of Supervising Kanungos.*

36. The average size of a supervisor kanungos' circle was :—

	Sq. miles.
In the Cachar district	133
„ Sylhet „	117
„ Assam Valley	340

Two kanungos in Assam failed to reach the prescribed minimum of days to be spent on tour, but the work of the staff as a whole came up to the mark. Forty-six field allowances were granted to supervising kanungos as a reward for good work.

(*d*) *Tours and inspections of Sub-Deputy Collectors.*

37. Assam Statement XIII shows the number of days spent by Sub-Deputy Collectors on tour. The work done by the Sub-Deputy Collectors has been, on the whole good, though some of them, particularly in the Cachar district, have failed to put in the prescribed minimum of tour.

(*e*) *Tours and inspections of Extra Assistant Commissioners and Subdivisional Officers.*

38. The Subdivisional Officers of Jorhat and North Lakhimpur spent much of their tour in testing mandals' papers and field work. Babus Harendra Kumar Ghose and Girish Chandra Nag, Extra Assistant Commissioners, inspected the work of a considerable number of mandals, and Babu Jagnesvar Das Gupta, Extra Assistant Commissioner, supervised minor cadastral operations in Goalpara in addition to his other duties. Among the Deputy Commissioners who inspected land records, may be mentioned Messrs. Lees and Davis of Darrang, Mr. Jackson of Kamrup, and Major Playfair of Garo Hills.

(f) Changes.

39. The new Land Records Manual was introduced during the year in all plains districts. One of the most noticeable features of the new Manual is the system of recording mutations in the field without any formal application from the parties concerned. The system is reported to be working well. I have not had time since I joined the department to inspect its working on the ground, but I shall do so before the close of the touring season.

CHAPTER VI.

SURVEY MARKS.

I.—Erection and maintenance of Survey Marks in transferred districts.

40. In the transferred districts stone prisms are erected by the traverse surveyors in the course of survey operations in order to mark the trijunction points of three villages. The transferred districts are generally subject to diluvion and to the deposit of silt, both of which natural operations render difficult the subsequent maintenance of the trijunction marks. Rules were, however, drawn up by the Bengal Government on this subject. These rules were published as Appendix T to the Survey and Settlement Manual and are now being adopted with such local variations as are considered necessary by the authorities of all districts in which surveys and records-of-rights have taken place. The main scheme of the rules is that the Settlement Department should inspect in a systematic manner all the stones embedded by the traverse surveyors, replacing them where necessary by fresh stones; that the Settlement Department should prepare a register of stones and should hand over the register to the District Officer; and that the District Officer should arrange for the subsequent inspection of the stones by responsible officers. When these rules are in full force, systematic inspection of stones will take place not only in Government and wards estates, but throughout the province generally. For the present, I can only furnish a few inspection figures dealing almost exclusively with some Government estates or some wards estates. These figures will be found in Statement XIA. Generally speaking they indicate a satisfactory amount of inspection. Most of the stones reported to be missing were worked away by diluvion, and could not be replaced. I should add that under section 114 of the Tenancy Act, the cost of subsequently maintaining boundary marks can be taken as part of the cost of the operations under Chapter X of the Tenancy Act. It is, therefore, legal to add to the items of actual expenditure an item representing the capitalised cost of the future annual maintenance of the boundary marks. This item can be legally realised from the landlords and tenants along with the items of actual expenditure. In the case, however, of operations covering entire districts, even the capitalised cost of maintaining marks is an insignificant sum when taken along with expenditure actually incurred. It can hardly affect the rate at which costs are levied.

II.—Survey Marks in Assam.

41. *Erection and maintenance.*—New boundary marks were erected in Lakhimpur, Sylhet, and Cachar. Assam Statement XIB shows the condition of boundary pillars and other survey marks.

42. *Advance.*—The total demarcation advances to be recovered during the period under review amounted to Rs. 4,910. Out of this sum Rs. 1,210 was realised and Rs. 1,400 written off, leaving a balance of Rs. 2,300 outstanding for recovery, against Rs. 3,910, the balance at the close of the previous year.

CHAPTER VII.

MISCELLANEOUS.

Tours of the Director of Land Records and his Assistants.

43. Mr. Barnes spent 207 days on tour, during the course of which he inspected the settlement operations in Kamrup, Sibsagar, Darrang, Bakarganj, Nowgong, Faridpur, Tippera, Noakhali, and Rangpur, besides visiting the Sylhet, Sibsagar, and Lakhimpur districts with a view to inspect land records and extension surveys. In July 1906, he went to Jalpaiguri to make arrangements for the survey and settlement of the Jalpaiguri district. The remainder of Mr. Barnes' tour was devoted an agricultural inspections. Srijut Radha Kanta Handiqui joined his duties as Land

Records Assistant to the Director (a post newly created during the year) on 11th May 1903, and spent 101 days on tour, inspecting the Land Records establishments of Assam. Mr. Thomas Shaw, the late Superintendent of Provincial Surveys in Assam, spent 187 days on tour.

Merits of Officers.

44. In addition to the officers whom I have mentioned by name in the body of my report, I desire to bring to the notice of the Board that from among his large staff Mr. Jack makes special commendation of Babu Har Kisore Biswas and Maulvi Atawar Rahman, Sub-Deputy Collectors, and of Babu Sudhir Chandra Ghosh, an outsider Assistant Setllement Officer. Mr. Edwards reports well of Babu Devendra Kumar Mukherjee, Extra Assistant Commissioner, and Srijut Bharat Chandra Das, Sub-Deputy Collector. Mr. McSwiney has been satisfied with the work of Srijut Hem Chandra Goswami, Extra Assistant Commissioner, and Babus Probhat Chandra Chatterjee, Bhola Nath Das, and Birendra Kumar Basu, Sub-Deputy Collectors. I have as yet no personal knowledge of the Assam officers, but I think it right that the commendations of their immediate superiors should be reproduced. As regards the Settlement Officers themselves, Mr. Barnes has left very favourable notes regarding the works of Messrs. Edwards and McSwiney. The work of Mr. Jack is too well known to Government to require any eulogium from my predecessor or from myself.

The work of the Sub-Deputy Collectors who have supervised the maintenance of land records in Assam will, I understand, be reported on by the Deputy Commissioners concerned.

N. D. BEATSON BELL,

Director of Land Records and Agriculture,
Eastern Bengal and Assam.

APPENDICES.

EASTERN BENGAL.

APPENDIX

General Progress in Survey

Division and district.	Name of estate or tract under settlement.	Date of inception of operations.	Estimated area, in square miles, under settlement.	Total number of villages.	Area cadastrally surveyed, in square miles.			Linear mile of test survey.	Number of shoets.	Number of		
					Up to end of the preceding year.	During the year.	Total.			In which records have been prepared for attestation.		
										Up to the end of the preceding year.	During the year.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13
Chittagong Division.										(a) *Settlement of Land and temporarily*		
Tippera	Government estate ...	4th September 1903 ...	45·01	179	45·01	...	45·01	...	...	179	...	179
Noakhali	Government and Proprietory estate.	9th April 1904, 20th November 1904, 9th December 1905.	32·00	13	31·90	·10	32·00	·54	2	12	1	13
		Total ...	77·01	192	76·91	·10	77·01	·54	2	191	1	192
Dacca Division.										(b) *Other Settlements*		
Bakarganj	District operations ...	November 1900 ...	34·01	3,058(b)	(a)	94(c)	94	...	377	(a)	37	37
Chittagong Division.												
Tippera	Zamindari estate ...	4th September 1903 ...	37·76	80	37·76	...	37·76	...	...	80	...	80
Noakhali	,, ,, ...	9th April 1904, 15th December 1905.	63·47	72	51·06	12·41	63·47	2·70	24	62	10	72
Rajshahi Division.												
Rangpur	Panga	November 1903 ...	74·00	301	74·00	...	74·00	34·28	309	295	6	301
	Kuribari	February 1904 ...	7·82	2	7·82	...	7·82	8·26	10	2	...	2
	Koya	November 1904 ...	20·73	7	18·64	2·09	20·73	20·46	24	4	3	7
	Chhatnai	April 1903 ...	6·74	2	6·74	...	6·74	11·87	21	2	...	2
Pabna	Mirkatia Digar ..	22nd July 1906 ...	2·57	12	...	2·57	2·57	...	19	...	12	12
		Total ...	3,614·09	3,534	196·02	111·07	307·09	77·57	784	445	68	513
		Grand Total ...	3,691·10	3,726	272·93	111·17	384·10	78·11	786	636	69	705

I.

and Settlement Work.

villages.

In which attestation has been completed.			In which draft publication has been completed.			In which final publication has been completed.			Cost of operations.			Total cost rate in the operations shown as completed in this return.		Remarks.
Up to the end of the preceding year.	During the year.	Total.	Up to the end of the preceding year.	During the year.	Total.	Up to the end of the preceding year.	During the year.	Total.	Up to the end of the preceding year.	During the year.	Total.	Estimated.	Actual.	
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Revenue in Government settled estates.									Rs.	Rs.	Rs.			
179	...	179	175	...	175	29	143	175	22,215	7,599	29,814	...	...	
7	6	13	7	6	13	...	13	13	11,733	7,327	19,060	...	...	
186	6	192	182	6	188	29	159	188	33,948	14,926	48,874	...	...	
(*zamindari estates*).														
2,065	991	3,056	2,065	991	3,056	610	574	1,184	8,56,541(*d*)	3,37,548	11,94,092	...	...	(*a*) So long the work was done by Survey Department. (*b*) Revised figures. (*c*) Out of 486 square miles all but 91 were jungle. (*d*) Excludes the cost of survey training at Titaghar and Ranchi.
80	...	80	80	...	80	17	63	80	20,693	10,301	30,994	...	...	
29	33	62	24	38	62	14½	28	42	13,610	9,693	23,303	...	...	
												...	...	
93	208	301	93	208	301	...	301	301	38,091	12,272	50,363	...	...	
...	2	2	...	2	2	...	2	2	3,640	1,866	5,506	...	...	
...	7	7	...	7	7	...	7	7	3,184	4,967	8,151	...	...	
2	...	2	2	...	2	...	2	2	3,330	2,387	5,717	...	...	
...	9	9	...	...	...	..	...	...	...	336	336	...	...	
2,269	1,250	3,519	2,264	1,246	3,510	641	977	1,618	9,39,092	3,79,370	13,18,462	...	...	
2,455	1,256	3,711	2,446	1,252	3,698	670	1,136	1,806	9,73,040	3,94,296	13,67,336	...	...	

ASSAM.

APPENDIX II.

Non-cadastral Area surveyed and mapped during the fifteen months ending the 30th September 1906.

Name of subdivision or district.	Total settled non-cadastral area, in acres.	Area surveyed and mapped, in acres.	Area surveyed and passed as correct, in acres.	Amount of rewards paid or due.
1	2	3	4	5
				Rs. a. p.
Cachar ... Hailakandi ...	771·29	771·29	771·29	.....
Sylhet ... Karimganj ...	50,174·00	460·00	460·00	.....
Habiganj ...	...	1,019·41	1,019·41	.....
Goalpara ... Dhubri ...	121,773·00(*b*)	3,538·00	(*a*)	(*a*)
Kamrup ... Barpeta ...	15,731·64(*b*)	15,719·40	(*a*)	(*a*)
Gauhati ...	24,846·91(*b*)	18,687·72	13,349·93	677 2 1
Darrang ... Tezpur ...	37,270·71(*c*)	16,581·29	16,581·29	763 9 3
Mangaldai ...	33,202·00(*b*)	3,471·00	2,511·60	226 10 0
Nowgong	7,527·93(*b*)	5,521·98	5,296·52	250 5 6
Sibsagar ... Golaghat ...	30,258·19	4,102·53	4,102·53	193 14 3
Jorhat ...	17,988·78	4,906·11	3,381·00	159 13 6
Lakhimpur ... Dibrugarh ...	208,466·00	21,941·19	21,941·19	1,028 6 4
North Lakhimpur	33,725·74	24,817·36	24,817·36	399 3 3
Garo Hills	27,935·78	7,712·12	7,712·12	258 11 9
Total	609,671·97	129,149·40	101,944·24	3,957 11 10

(*a*) Area not yet checked.

(*b*) Revised figures.

(*c*) Includes the area of ten villages surveyed in the previous year and redone during the period under report.

ASSAM.

APPENDIX III.

Resettlements during the fifteen months ending the 30th September 1906.

District.	Number of villages.				Office work for villages dealt with in the field during the year preceding.	Field work during the year under report.					Assessment.			Expenditure		Incidence of total expenditure per square mile of area		
	Total in the district.		Taken up to the end of the year under report.		Number of villages to be dealt with in office.	Number of villages for which		Number of villages for which			Number of villages for which rates have been submitted.			During the year.	Total to end year.	For which maps and records corrected.	Attested.	For which revenue rates submitted.
	Established.	Fluctuating.	Established.	Fluctuating.		Maps faired.	Records faired.	Maps and records corrected.	Land classed.	Maps and records attested.	During the year.	Previously.	Total to end of year.					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
														Rs.	Rs.			
Darrang ...	1,242	105	764	16	764	...	...	764	94	94	...	...	...	33,930	33,930	...	...	...
Nowgong ...	847	468	847	...	140	129	140*	847	140	140	140	...	140	27,774†	27,774	...	...	233·40‡
Total ...	2,089	573	1,611	16	904	129	140	1,611	234	234	140	...	140	61,704	61,704	...	...	233·40

* Field Register and register of area and crop abstracts fairs.

† Bills actually cashed up to 30th September 1906.

‡ Non-cadastral area excluded.

EASTERN BENGAL.

APPENDIX

Progress in Case-work.—Settlement of Rents under Section 104 *of Act VIII of* 1885 *in Government*

Estate or tract under settlement.	Total area.	Total number of villages.	Total number of tenants.	Number of tenants for whom rents have been proposed.			Of the tenants in column 6.		
				To the end of the previous year.	During the year.	Total.	Former rental.	New rental.	Difference per cent.
1	2	3	4	5	6	7	8	9	10
							Rs.	Rs.	
Bakarganj.									
Government and temporarily-settled estates in Blocks A, B, and C.	249	287	14,500	2,950	8,755	11,705	29,206	36,433	+ 25
Tippera.									
Government estates	45·01	175	10,123	6,751	3,372	10,123	17,940	22,967	28
Noakhali.									
Government estates	32	13	1,887	...	1,887	1,887	21,400	44,580	108
Total	326·01	475	26,510	9,701	14,014	23,715	68,546	1,03,980	52

EASTERN BENGAL.

APPENDIX

Settlement of Rents under Section 105 *of Act VIII*

Estate or tract under settlement.	Total area.	Total number of villages.	Total number of tenants.	Number of cases which have been instituted.					
				To the end of the previous year.		During the year.		Total.	
				Number.	Number of tenants.	Number.	Number of tenants.	Number.	Number of tenants.
1	2	3	4	5	6	7	8	9	10
Bakarganj.									
Bamna and Block A	521	639	109,990	731	862	58	58	789	920
Tippera.									
Zamindari estates	37·76	80	8,247	23	984	75	3,309	98	4,293
Noakhali.									
Zamindari estates	63·47	72	12,303	25	124	38	410	63	534
Rangpur.									
Chhatnai—Zamindari estates	6·74	2	1,499	...	...	28	1,499	28	1,499
Khoribari	7·82	·2	200	...	...	2	200	2	200
Total	636·79	795	132,239	779	1,970	201	5,476	980	7,446

IV(*a*).

and temporarily-settled estates during the year ending 30*th September* 1906.

Number of villages for which settlement rent roll has been published in draft.			Objections under Section 104E.						Number of villages of which during the year a settlement rent-roll has been			Remarks.
			Instituted			Disposed of						
To the end of the previous year.	During the year.	Total.	To the end of the previous year.	During the year.	Total.	To the end of the previous year.	During the year.	Total.	Submitted for confirmation.	Confirmed.	Incorporated in the draft record.	
11	12	13	14	15	16	17	18	19	20	21	22	23
73	87	160	136	164	300	117	183	300	154	146	126	
106	69	175	824	414	1,238	824	414	1,238	163	163	163	
...	13	13	...	524	524	...	524	524	13	13	13	
179	169	348	960	1,102	2,062	941	1,121	2,062	330	322	302	

IV(*b*).

of 1885 *in Zamindari* (*private*) *estates.*

Number of cases which have been disposed of.						Of tenants in column 14.			Remarks.
To the end of the previous year.		During the year.		Total.					
Number.	Number of tenants.	Number.	Number of tenants.	Number.	Number of tenants.	Former rental.	New rental.	Difference per cent.	
11	12	13	14	15	16	17	18	19	20
						Rs.	Rs.		
419	488	11	11	430	499	9,344	10,031	7·35	
	402	96	3,891	98	4,293	43,744	52,785	20·7	
...	...	42	141	42	141	996	1,088	9	
...	...	28	1,499	28	1,499	7,203	8,824	22·49	
...	...	2	200	2	200	681	889	30·51	
421	890	179	5,742	600	6,632	61,968	73,617	18·79	

EASTERN BENGAL.

APPENDIX IV(*c*).

Disposal of Case-Work other than settlement of fair rents during the year ending the 30th September 1906.

Name of district and nature of case.	Instituted to the end of the previous year.	Instituted during the year.	Total instituted.	Disposed of in previous years.	Disposed of during the year.	Total disposed of.	Balance pending.	Remarks.
1	2	3	4	5	6	7	8	9
I.—*Land Revenue Settlement (Government and temporarily-settled estates).*								
Tippera.								
Boundary disputes ...	33	...	33	33	...	33	...	
Objections under section 103A	1,085	11	1,096	980	116	1,096	...	
Miscellaneous	82	22	104	78	26	104	...	
Noakhali.								
Boundary disputes ...	...	2	2	...	2	2	...	
Section 103A	73	172	245	73	172	245	...	
II.—*Other Settlements (Zamindari estates).*								
Bakarganj.								
Boundary disputes ...	247	3	250	247	3	250	...	
Section 103A	21,895	6,245	28,140	18,376	6,578	24,954	3,186	
Ditto 106	918	379	1,297	322	396	718	579	
Tippera.								
Boundary disputes ...	32	...	32	32	...	32	...	
Section 103A	640	1	641	495	146	641	...	
Ditto 106	84	111	195	66	129	195	...	
Miscellaneous	129	26	155	96	59	155	...	
Noakhali.								
Boundary disputes ...	2	14	16	2	14	16	...	
Section 103A	66	439	505	66	439	505	...	
Ditto 106	18	250	268	1	17	18	250	
Rangpur.								
Section 103A	...	...	...	...	...	...	...	
Panga	463	602	1,065	463	602	1,065	...	
Khoribari	...	7		...	7	7	...	
Koya	...	389	389	...	389	389	...	
Chhatnai	653	...	653	653	...	653	...	

EASTERN BENGAL.

APPENDIX VI(*d*).

Settlement of Land Revenue during the year ending the 30th September 1906.

Name of tract or estate.	Total area.	Total existing assets.	New land revenue settled during the year.				Total costs incurred in area in column 4.	Cost-rate according to sanctioned estimate.	Actual cost-rate, column 8÷4.	Remarks.
			Area.	Existing land revenue.	New land revenue.	Percentage of difference, + or —.				
1	2	3	4	5	6	7	8	9	10	11
Tippera.	Sq. m.	Rs.	Sq. m.	Rs.	Rs.		Rs.	Rs.	Rs.	
Government estate ...	45·01	45,756	23·53	28,507	34,197	+ 19·96	20,583	647	721	
Noakhali.										
Government estate ...	32·00	21,400	32·00	21,400	44,580	+ 108	...	...	...	
Bakarganj.										
Government and temporarily-settled estates in blocks A and B.	117·60	56,000	3·82	7,883	8,861	+ 20	Separate figures are not available.			

EASTERN BENGAL.

APPENDIX IV(*e*).

Results of Appeals during the year ending the 30th September 1906.

Name of district and nature of case.	Pending from previous years.	Instituted during the year.	Disposed of during the year.	Balance pending.	Results of appeals from entries in column 4.				Remarks.
					Decisions.			Cases returned for retail.	
					Upheld.	Modified.	Reversed.		
1	2	3	4	5	6	7	8	9	10
I.—*Settlement of Land Revenue (Government and temporarily-settled estates).*									
Tippera.									
Section 104E ...	...	1	1	...	1	...	...	...	
Noakhali.									
Section 104E ...	...	39	39	...	27	...	12	...	
II.—*Other Settlements (Zamindari estates).*									
Bakarganj.									
Boundary disputes ...	2	5	7	...	7	...	...	...	
Section 106	...	5	1	4	1	...	...	...	
Tippera.									
Boundary disputes ...	2	...	2	...	2	...	...	...	
Noakhali.									
Boundary disputes ...	4	...	4	...	4	...	...	...	
Rangpur.									
Section 105, Chhatnai ...	...	2	...	2	...	...	...	...	
„ 106, ditto ...	...	36	...	36	...	...	...	...	

EASTERN BENGAL.

APPENDIX V.

Statement showing the Progress made in Recovery of Costs during the year ending 30th September 1906.

Division.	District.	Estate or tract under settlement.	Demand.			Collections.							Balance.			Remarks.
						Landlord's share.			Occupier's share.							
			Landlord's share.	Occupier's share.	Total.	Voluntary.	By certificate.	Total.	Voluntary.	By certificate.	Total.	Grand total collected.	Landlord's share.	Occupier's share.	Total.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
			Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Dacca ...	Bakarganj ...	District of Bakarganj.	29,899	9,783	39,682	25,632	6,554	32,186	5,370	3	5,373	37,559	27,713	4,410	32,123	The figures relate only to the villages made over to the recovery staff during the year under report.
Chittagong ...	Tippera ...	Zamindari estates.	...	7,109	7,109	...	...	...	6,828	13	6,841	6,841	...	267	267	

EASTERN BENGAL.

APPENDIX VI.

Statement showing the Nature and Number of the Holdings recorded in each Settlement during the year ending 30th September 1906.

Name of district and tract under settlement.	Number of khatians recorded in the name of													Remarks.
	Properties.		Tenure-holder's cultivating possession.	Raiyat at fixed rates or fixed rents.	Settled raiyat.	Occupancy raiyat.	Non-occupancy raiyat.	Rent-free holders.		Properties or tenure-holders as unoccupied.	Government.	Total.	Under-raiyats.	
	As private lands.	Not as private lands.						Service tenure.	Others.					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
I.—Land Revenue Settlements (Government and temporarily-settled estates).														
Noakhali.														
Government estates	...	...	57	...	97	45	664	...	...	...	2	865	...	
II.—Other Settlemants (Zamindari estates).														
Bakarganj.														
Zamindari estates (Blocks D and E).	...	501	112,611	800	148,379	723	5,423	182	7,131	2,316	135	278,201	18,168	
Noakhali.														
Zamindari estates	...	13	2,080	...	2,115	35	53	20	16	...	...	4,331	125	
Rangpur.														
Khoribari	...	2	689	...	910	...	314	...	1	...	2	1,918	...	
Panga	...	...	4,867	9	21,950	...	31	20	17	198	74	27,166	185	
Koya	1	...	493	1	2,543	...	54	9	19	17	122	3,359	...	

EASTERN BENGAL.

APPENDIX VII.

Showing Mutations in Tenants' Rights for the year ending 30th September 1906.

Division and district.	Estate.	Total area of the estate, in acres.	Total number of tenancies.	Number of mutations registered.										Percentage of mutations to total number of tenancies, columns 13 and 14 on column 4.	Total area, in acres, transferred.	Average price per acre of land sold.
				Sale.		Succession.		Partition.		Gift.		Total.				
				Whole.	Part.	Whole.	Part.	Whole.	Part.	Whole.	Part.	Whole.	Part.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

EASTERN BENGAL.

APPENDIX VIII.

Showing Resettlement of Vacant Tenancies during the year ending 30th September 1906.

Division and District.	Estate.	Vacant tenancies to be resettled during the year.		Vacant tenancies resettled during the year.		Remarks.
		Number.	Area, in acres.	Number.	Area, in acres.	
1	2	3	4	5	6	7
	Government estates.					
Dacca Division.						
Mymen ingh	Government estates ...	2	2·27	2	2·27	
Bakarganj	Ditto	29	661	29	661	
Chittagong Division.						
Noakhali	Ditto	17	336·31	...	...	
Rajshahi Division.						
Jalpaiguri	Ditto	68	1,656·92	12	268·95	
Bogra	Jaipur Government estates.	50	79·01	26	54·13	
Pabna	Government estates ...	10	30	8	29	
	Wards' estates.					
Dacca Division.						
Bakarganj	Dakhin Shahbazpur ...	7	9·43	7	9·43	
Rajshahi Division.						
Dinajpur	Churamon ...	681	1,257	21	97	
Jalpaiguri	Baikunthapur estate ...	79	84·02	76	79·96	

EASTERN BENGAL.

APPENDIX IX.

Showing new Settlements of Waste Lands during the year ending 30th September 1906.

Division and district.	Estate.	Total number of new tenancies on new lands settled.	Total area of such tenancies.	Remarks. Explanatory of the mode of settlement, *i.e.*, whether rent was fixed according to settlement rates or otherwise.
1	2	3	4	5
	Government estates.			
Dacca Division.				
Mymensingh ...	Government estates ...	60	184·36	Settlement rates.
Bakarganj	Ditto	102	715	
Chittagong Division.				
Tippera	Ditto	51	67·10	
Noakhali	Ditto	78	612·93	Rent was fixed according to settlement rates in 76 cases and otherwise in two cases.
Rajshahi Division.				
Jalpaiguri	Ditto	427	8,818·60	Rent fixed according to settlement and pargana rates.
Bogra	Jaipur Government estates	112	8180	
	Wards' estates.			
Dacca Division.				
Bakarganj	Dakhin Shahbazpur ...	275	3,009·82	Rent was fixed according to prevailing rates.
Rajshahi Division.				
Dinajpur	Churamon	771	775·62	
Jalpaiguri	Baikunthapur estate ...	8	8·10	

EASTERN BENGAL.

APPENDIX X.

Result of Inspection of Rent-rolls for the year ending 30th Spetember 1906.

Division and district.	Estate.	Total number of villages in the estate.	Total number of tenants.	Percentage of villages in column 3 of which rent-rolls were examined to detect unreported mutations.	Total number of tenants in villages referred to in column 5.	Percentage of tenants in the villages in column 5 whose rent-rolls were examined.	Number of unreported mutations detected.	Percentage of such mutations to mutations recorded.	Remarks.
1	2	3	4	5	6	7	8	9	10
	Government estates.								
Dacca Division.									
Mymensingh ...	Government estates ...	82	5,129	50·00	1,798	2,500	20	26·66	
Faridpur	Taluk Basudeb Rai ...	54	1,000	75	685	00	30	68	
	Kalkini	27*	5,050*	88·9	5,242	66	248	75·2	
Bakarganj	Government estates ...	47	30,990	57·5	23,003	100	284	48·97	The increase in column 9 is due to record of mutation and settlement of lands in case estate.
Chittagong Division.									
Noakhali	Government estates ...	20	5,156	90	5,049	6·3	235	70	
Rajshahi Division.									
Jalpaiguri	Government estates ...	239	29,313	195·32	16,029	127·72	348	66·73	
Bogra	Jaipur Government estate	153	7,261	40·00	2,938	100·00	113	39·10	
Pabna	Government estates ...	16	2,409	68·75	409	19·97	...	...	
Dacca Division.									
Bakarganj	Dakhin Shahbazpur ...	37	12,441	100·00	12,441	100·00	2	0·09	
Rajshahi Division.									
Dinajpur	Churamon	679	26,872	57	11,904	43·70	1,870	151·4	

* The decrease is due to diluvion.

EASTERN BENGAL.

APPENDIX XIA.

Result of Inspection of Boundary marks during the year ending 30th September 1903.

Division and district.	Total number of estates surveyed under the Survey Act or Bengal Tenancy Act.	Total number of estates in which permanent boundary marks were erected.	Number of marks erected in the estates mentioned in column 3.	Number of marks inspected during the year under report	Result of inspection of the marks shown in column 5.			Number of damaged or missing marks restored.	Cost of restoration and how met.	Result of prosecution if any.
					Number in fair order.	Number damaged.	Number missing.			
1	2	3	4	5	6	7	8	9	10	11
	Government estates.									
Chittagong Division.										
Noakhali	9	9	168	168	156	1	1	1	Rs. a. p. 0 12 0 Khas mahal contingent grant.	—
Dacca Division.										
Mymensingh	...	...	...	...	...	...	...	...	...	—
Bakarganj	187	41	451	451	383	14	54	...	...	—
Rajshahi Division.										
Jalpaiguri	5	5	2,677	230	141	1	88	...	...	—
Bogra	2	2	579	579	579	...	...	2	...	—
	Wards' estates.									
Dacca Division.										
Bakarganj	1	1	1,110	915	868	9	38	...	...	—
Rajshahi Division.										
Dinajpur	1	1	Not reported.	169	169	...	...	...	...	—
Chittagong Division.	*Zamindari estates.*									
Noakhali	3	3	50	21	21	...	...	...	...	—

ASSAM.

APPENDIX XIB.

Statement showing the Condition of Survey Marks on the 30th September 1906.

No.	Classification.	Total number of marks.	Total number found in good order.	Number found not in good order.		Total of columns 4 and 5 in good order on 1st October 1906	Number lost or left unvisited.
				Repaired.	Not repaired.		
1	2	3	4	5	6	7	8
1	Trijunction prisms	15,234	13,278	478	180	13,756	1,298
2	Traverse stations shown by mounds and boughs	82,092	45,186	17,936	8,680	63,122	11,190
3	Kanungo's mounds, including jungle mounds	10,108	5,150	2,106	1,202	7,256	1,650
4	Country stones on theodolite stations ...	18,943	16,853	55	338	16,908	1,696
5	Prisms on boundaries of grants ...	7,479	6,965	64	115	7,029	321
6	Concrete blocks on boundaries of grants ...	16,494	14,545	139	233	14,684	1,568
7	Country stones on boundaries of grants ...	26,181	21,529	81	617	21,610	3,957
8	Mounds on ditto ditto ...	3,792	2,455	228	740	2,683	366
9	Brick pillars on ditto ditto ...	267	264	...	2	264	1
10	Iron posts	15	15	...	...	15	...
11	Brick-pillars on town boundaries ...	...	...	...	...	...	...
	Total	181,505	126,240	21,087	12,107	147,327	22,047

Where the number of marks now reported varies from the number previously reported, explanations have been given by local officers.

ASSAM.

APPENDIX XII.

Statement showing the Number of Mandals and Patwaris in each Subdivision and the Number in charge of their Home Circle.

Subdivision.	Number of mandals and patwaris.						
	Period under report.				Previous year.		
	Resident.	Specially exempted.	Non-resident.	Dismissed during the year for non-residence.	Resident.	Specially exempted.	Non-resident.
1	2	3	4	5	6	7	8
Hailakandi	14	7	8	...	10	11	8
Silchar	25	...	43	...	12	...	56
Jaintia (North Sylhet) ...	36	2	6	...	7	...	39
Pratabgarh	7	...	3	...	1	...	9
Dhubri	10	...	23	...	4	...	29
Barpeta	30	...	41	...	26	...	44
Gauhati	133	...	94	...	103	...	127
Mangaldai	38	...	47	...	18	...	67
Tezpur	34	16	21	...	24	18	16
Nowgong	79	...	89	...	73	...	95
Golaghat	23	...	33	...	21	...	35
Jorhat	32	14	31	...	25	...	52
Sibsagar Sadr	41	1	30	...	28	...	44
North Lakhimpur	22	...	10	...	17	...	15
Dibrugarh	66	2	13	...	37	...	43
Garo Hills	1	5	6	...	1	5	6
Total	581	47	498	...	407	34	685

APPENDIX XIII.

ASSAM.

Work Statement of Sub-Deputy Collectors for the 15 *months ending* 30*th September* 1906.

Subdivision.	Name of Sub-Deputy Collector.	Total number of days in charge.	Total number of days on tour.	Number of mandals or patwaris in circle.	Number of mandals or patwaris whose papers were checked.	Number of villages in circle.	Number of villages visited.	Total length of check lines run (linear miles).	Area, in acres, of concealed cultivation discovered.	Remarks.
1	2	3	4	5	6	7	8	9	10	11
Hailakandi ..	Munshi Ikram Russool..	171	24	29	14	269	21	·49	..	Was in charge from 1st July 1905 to 18th December 1905.
	Babu Purna Chandra Mitra.	286	98	29	29	269	205	2·03	..	Took charge on 19th December 1905.
	Maulvi Saleh Ahmed ..	96	19	29	29	269	26	..	..	Joined on 27th June 1906.
Silchar	Babu Pradyumna Charan Das.	442	76	25	16	294	166	91·58	..	He was on privilege leave for 15 days.
	,, Surendra Nath Datta.	258	82	26	26	283	241	3·00	..	
	Munshi Saifuddin Ahmed, B.A.	425	264	48	40	599	516	56·34	..	He was on privilege leave for 32 days.
North Sylhet ..	Srijut Surja Kanta Barua (Gowainghat tahsil).	448	206	30	30	320	195	66·21	3·00	
	Babu Krishna Kumar De (Gowainghat tahsil).	110	..	..	..	..	..	..	..	
	Maulvi Tazammul Ali, B.A. (Kanairghat tahsil).	457	255	16	16	223	200	..	..	
North Sylhet, South Sylhet, Habiganj and Sunamganj.	Babu Srish Kumar Sen (Ilam).	288	112	10	10	1,444	26	3·06	..	
Karimganj ..	,, Krishna Kumar De.	457	234	10	10	439	232	5·85	..	
Dhubri	Maulvi Mofizur Rahman, B.A.	158	85	33	17	333	13	10·45	..	Made over charge in the afternoon of 5th December 1905, on transfer to Nowgong.
	Babu Chandra Kumar Sen Gupta, B.A.	167	80	33	12	333	..	..	..	Joined on the 17th April 1906, was engaged in income-tax and local rates assessment and other miscellaneous revenue enquiries.
Barpeta	Babu Debi Charan Rai, M.A.	233	69	20	19 on field 20 in office	240	74	13·84	10·3	
	Srijut Kamal Chandar Kagti.	242	174	51	40 in field 51 in office	373	140	8·22	5·26	
	Ditto ditto ..	215	203	70	70 in office	613	50	..	..	
Gauhati	Munshi Didaruddin Bora	457	217	38	28	299	93	3·33	..	
	Srijut Syam Lal Chaudhuri.	259	197	45	27	392	57	4·78	5·82	
	,, Janaki Nath Das	457	207	26	26	210	..	1·92	0·8	
	Munshi Ikram Rassul ..	289	130	57	57	335	57	2·74	..	
	Babu Giris Chandra Nandi.	264	132	38	30	232	No records kept.			
	,, Krishna Behari Chaudhuri.	65	27	38	..	232	16	..	..	
	Srijut Achyuta Nanda Pathak..	110	52	58	..	402	50	..	..	
	Babu Tarini Charan Nandi.	304	230	20	..	..	214	..	..	
Mangaldai ..	,, Prabhat Chandra Chatterji, B.A.	108	25	66	66	622	21	..	..	Excluding 30 days spent on privilege leave.
	Srijut Gunabhab Gosvami (Kalaigaon tahsil).	138	73	19	19	215	51	..	..	215 dags tested without check lines.
Tezpur	,, Bhola Nath Das ..	457	150	61	61	404	123	13·67	0·49	
	,, Retha Ram Sarma (Tezpur tahsil).	215	162	16	16	116	75	..	1·00	No check lines run, but partalled 63·80 acres of land without line.

APPENDIX XIII—*contd.*

Work Statement of Sub-Deputy Collectors for the 15 *months ending* 30*th September* 1906—concld.

Subdivision.	Name of Sub-Deputy Collector.	Total number of days in charge.	Total number of days on tour.	Number of mandals or patwaris in circle.	Number of mandals or patwaris whose papers were checked.	Number of villages in circle.	Number of villages visited.	Total length of check lines run (linear miles).	Area in acres of concealed cultivation discovered.	Remarks.
1	2	3	4	5	6	7	8	9	10	11
Nowgong ..	Srijut Bharat Chandra Das.	365	210	No fixed circle.	124	No fixed circle.	300	40·13	..	Joined as Assistant Settlement Officer on 1st November 1905.
	Srijut Kali Ram Medhi..	457	237	,,	100	,,	524	3·40	..	Was on special duty about 4 months in connection with flood damage enquiry.
	Maulvi Mofizur Rahman	289	146	,,	59	,,	156	21·20	..	Joined on 16th December 1905.
	Srijut Devananda Bhorali	38	..	,,	..	,,	..	..	..	Joined on 24th August 1906.
	,, Achyuta Nanda Barbak.	115	93	On training.	54	,,	72	3·50	..	Joined on 8th January 1906. Was on deputation on survey training from 1st February 1906 to 5th March 1906 and left the district on 6th June 1906.
	Mr. O. Gatphoh ..	78	34	,,	..	..	69	..	..	Joined on 14th November 1905, and left the district for survey Training at Camp Halem where he died on 8th February 1906.
Golaghat	Babu Mahendra Kumar Dam.	421	261	71	71	176	97	2·00	..	Excluding the period he was under Survey Training in the Survey Camp from 1st February to 5th March 1906.
Jorhat	Srijut Prabhat Chandra Bordoloi, B.A.	457	176	40	43	335	271	2·63	..	
	,, Bistu Ram Barua	92	67	16	..	116	..	..	..	
	,, Ramu Kanta Barua, B.A.	259	172	57	57	362	249	12·97	..	
Sibsagar Sadr ..	Babu Raj Kumar Ray ..	218	67	22	21	212	33	0·90	..	
	,, Sarat Chandra Lahiri, B.L.	279	114	35	20	233	152	6	20·82	
	Maulvi Phukan Ali, B.A.	457	213	15	15	111	85	..	..	
	Nural Hossain Hazarika, B.A.	35	..	..	..	..	..	..	..	
	Srijut Devananda Bhorali, B.A.	40	1	..	..	..	..	..	..	
Dibrugarh ..	Babu Jagat Chandra Das, B.A.	462	189	37	31	230	120	14·25	..	
	Maulvi Azimuddin Ahmed, B.A.	353	225	73	25	356	152	11·29	..	
	Babu Pramode Chandra Sen Gupta, B.A.	198	121	27	27	230	177	3·72	..	
	,, Rukini Kanta Chakravarti, B.A.	412	209	20	20	237	190	5·42	35	
North Lakhimpur ..	Babu Dwarka Nath Chaudhuri, B.A.	457	245	32	52	260	211	4·03	5·43	
	Maulvi Saleh Ahmed, B.A.	123	123	30	30	42	42	28·08	..	From 8th February to 11th June 1906. In charge of Extension Survey.

Extract from the Proceedings of the Lieutenant-Governor of Eastern Bengal and Assam in the Revenue Department, No. 4919C., dated Shillong, the 17th April 1907.

Read—

The Survey and Settlement Reports for the year ending the 30th September 1906, with the remarks of the Board of Revenue thereon.

RESOLUTION.

THE submission to Government of the Survey and Settlement Report for the year ending the 30th September 1906 has been delayed owing to a change in the incumbency of the office of Director of Land Records during the recess season, and to the detachment in the time of scarcity of the Settlement Officer of Bakarganj together with the major portion of his staff to assist in the distribution of loans and gratuitous relief to the poorer classes in the affected portions of that district,—a task which His Honour is pleased to notice was performed with conspicuous success.

2. The Survey and Settlement operations in the two portions of the Province are conducted under widely different systems and the prevalence of two divergent systems of control over the traverse survey has been found by the Board to cause much inconvenience. His Honour is in full agreement with the Hon'ble Members in their opinion that the operations in this province are of such importance as to warrant the permanent retention of a separate officer of the superior survey staff to supervise them in technical matters.

3. The major operations in Eastern Bengal were confined to the districts of Bakarganj, Dacca and Faridpur. The survey in the former district is nearing its close, and highly satisfactory progress was made in spite of very special difficulties. The cadastral survey and completion of the record-of-rights in the Sundarbans was carried out at considerable personal risk by Mr. Jack and his party during the year under report, and that portion of the work which remained unfinished in the remaining portions of Bakarganj was practically completed in spite of the determined opposition offered in some cases by a certain section of the community to the progress of the work.

4. The recovery of settlement costs during the year under report was somewhat below the expectations entertained. The year 1905-1906 was one of agricultural depression and after personal enquiries had been made by the First Member of the Board of Revenue, the Lieutenant-Governor, Sir Bampfylde Fuller, with the approval of the Government of India, directed that the realization of costs in the district should be deferred till January in order to tide the cultivators over a time of stress.

His Honour notes with pleasure the appreciation shown by the country people of the new Vandyked maps which are distributed to them with their copies of the record.

5. The traverse survey of the Dacca district was commenced this year. Considerable progress was made in spite of difficulties arising from the non-attendance of parties in many instances and the difficulty of establishing permanent marks in a country subject to heavy inundation. The cost of this traverse survey has worked out at Rs. 51-4 per square mile this year as against Rs. 45 originally estimated by the Government of Bengal. This is due to the complicated system of tenures that prevails in Dacca as well as in Bakarganj.

6. Adverse agricultural conditions and other causes prevented the inception of the cadastral operations in the district of Faridpur in the year under report, but the necessary preparations were made to undertake them in the year now current and they are actually in progress at the present time.

7. The work of the Bengal Drawing Office during the year is admirably described in Major Crichton's excellent report, and His Honour who has watched its developments almost from their very inception has much pleasure in testifying to the excellence of the work done.

8. Good progress was also made in laying down the boundary between the new and old provinces,—care being taken to make this work fit in with the cadastral survey already completed in Bakarganj.

9. In Assam the Land Revenue Settlement of the Sibsagar and Kamrup districts came to a close this year. The assessment of each district has now been placed on a scientific basis and it is believed that a great deal has been done to rectify the irregularities and inaccuracies of the previous settlement of 1893 and 1894. Reductions have been made in the revenue of the district of Kamrup owing to serious calamities having occurred since the previous settlement. A feature of these two settlements is the scientific classification of soils introduced by Sir Bampfylde Fuller and the uniformity of treatment for large areas thus ensured is an earnest of the success of this settlement as a whole.

The principles adopted in the resettlement of these two districts are also being observed in the districts of Darrang and Nowgong, where operations are in progress and His Honour is watching with interest the new departure made in the issue of *kacha pattas* before attestation.

10. The report closes with some weighty remarks on the important subject of the maintenance of the record. In Assam special controlling and field establishments have been employed for some years, but in Eastern Bengal the undertaking is wholly new, and the Lieutenant-Governor awaits with interest the scheme which Mr. Hughes Buller has been engaged in preparing for the district of Chittagong. The Director's criticisms of the existing rules for Wards estates and Government estates under direct management should be considered by the Board.

The thanks of the Lieutenant-Governor are due to Major Crichton, who has just left India on long furlough earned by years of valuable service and to Messrs. Barnes, Jack, Edwards, and McSwiney for the good work they have done, as well as to Mr. Beatson Bell himself for his concise and interesting report. The remarks on other officers who have rendered good service in this field of duty will be noted in the Appointment Department.

ORDER.—Ordered that this Resolution be published in the *Eastern Bengal and Assam Gazette* and that a copy of it with copies of the two reports be submitted to the Government of India.

By order of the Lieutenant-Governor,

H. LEMESURIER,

Offg. Chief Secretary to the Government of Eastern Bengal and Assam.

E. B. & A. S. P. O. (C. S. D.) No. 43—525—18-4-1907.

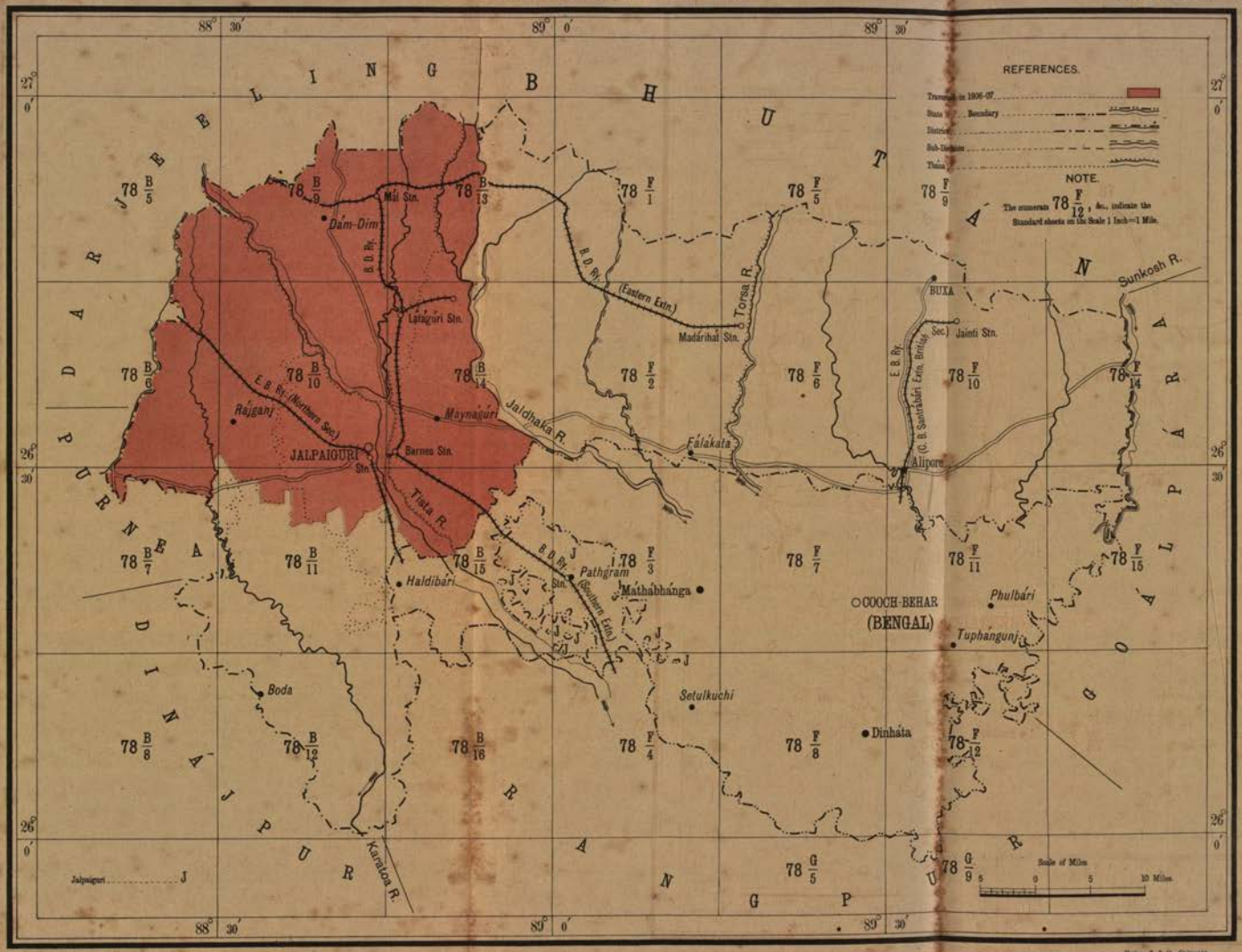
SHILLONG : Printed and published by E. HILL, Superintendent, Eastern Bengal and Assam Secretariat Printing Office : (C. S. D.) No. 1004—503—4-4-1907.

EASTERN BENGAL & ASSAM

1906-07

INDEX to the TRAVERSE SURVEY in DISTRICT JALPAIGURI

No. 6 PARTY.



Surv. No. 1906-07.—6. P.

Photo., S. I. O., Calcutta.

ANNUAL REPORT FOR THE SURVEY YEAR 1906-07.

No. 4422—R-17.

FROM

CAPTAIN F. C. HIRST, I.A.

OFFG. SUPERINTENDENT, PROVINCIAL SURVEYS,

BENGAL.

TO

THE SECRETARY TO THE BOARD OF REVENUE, EASTERN

BENGAL AND ASSAM.

Dated 26th. December 1907.

SIR,

I HAVE the honour to submit my Report on the Survey operations in Eastern Bengal during the past survey year, from 1st. October 1906 to 30th. September 1907.

(1) Major R. T. Crichton, the incumbent of the appointment I am officiating in, held charge until March 28th. 1907, when he went home on long leave in very indifferent health. Since that I have held charge myseif.

I have the honour to be,

Sir,

Your most obedient servant,

F. C. HIRST,

CAPTAIN, I. A.

Officiating Superintendent of Provincial Surveys Bengal.

CHAPTER I.

GENERAL REMARKS.

3. The outturn during the year was 1022 square miles of traverse survey against 1638 square miles completed during the last year. The full programme has been worked up to; the contraction in programme is due to previous year's traverse work in Dacca and Faridpur being considerably ahead of the cadastral operations; work in those two districts therefore has ceased temporarily.

Changes during the year.

4. (*a*) By order of the Surveyor-General all the records (sets up) of traverse work, after completion, have deen copied so that each settlement officer may receive a copy for his own use and so that, on the completion of the settlement operations in any district, the local authorities will have a complete record of traverse work done; another reason for the necessity of this procedure is that Topographical Surveyors, who will eventually revise or resurvey areas covered in Revenue operations, may have, at any time, all the records which they may require; to accomplish this, extra work has been thrown on the traverse section but when the resulting advantages are considered the slight extra cost involved is of little importance. No harm can ever come from duplicate copies of important records being kept in separate places and, provided that the cost of producing duplicates is not excessive, it will generally be admitted that their provision is advisable.

(*b*) The professional control of Bengal Surveys has, from the 1st September 1907, been transferred from the Deputy Surveyor-General to the Surveyor General.

(*c*) My office work has increased to a great extent; this is due to the control of the surveys of the transferred districts of this Province and those of Bengal being under the same survey officer, who is subordinate to two Boards of Revenue; the partition caused an immediate duplication of all reports and returns, and now as changes in procedure in both Provinces occur, since these seldom coincide, there is a gradual drifting apart which tends to make my appointment more and more difficult; so far the interests of the two Governments do not conflict, but it is doubtful if they will not do so in the near future.

(*d*) The question of accounts has received much attention during the year; it is proposed by the Board of Revenue, Lower Provinces, to substitute the system of a permanent advance for that of Letters of Credit, it being seldom that our survey parties will be working far from a local treasury. A European Accountant (Mr. Picachy) has been lent me and he has for some months been engaged in framing the rules, which it is earnestly hoped will lead to a change of system at the beginning of the next Financial year. Mr. Picachy has given me every possible help, and even if the new system is not introduced his suggestions on many points will have facilitated work and reduced considerably the risk there is, under the present system, of loss of Government money.

CHAPTER II.

PART I

Reports on Surveys in Temporarily-settled and Government Estates under Settlement of Rents and Land Revenue.

Nil.

PART II.

REPORTS ON SURVEYS IN PRIVATE ESTATES.

DISTRICT JALPAIGURI.

TRAVERSE SURVEY.

5. Under the Board's Order No. 253 $\frac{S.\ \&\ S.}{G.}$, dated the $\frac{31st\ July}{10th\ August}$ 1906, traverse work was transferred from the District of Dacca (where operations had been temporalily stopped) to the District of Jalpaiguri.

6. Of the 1018 square miles surveyed the settlement officer required 16" plots of about 70 square miles adjoining the station of Jalpaignri, for the purpose of instructing his staff, and on the 10th January 1907, he received the same; the area dealt with comprises Parganas (north and south) Mainaguri, Changmari and the Baikunthapur Estate. The 1018 square miles referred to above is made up of 563 square miles of Government Estates and 455 square miles of the Baikunthapur Estate; as the two surveys were carried on together the whole operations are reported on here under the head of Private Estates.

7. The unit of the traverse survey was a *taluk*, which corresponds to a village and is generally made up of numerous *jotes*. The settlement officer desired that each jote within a taluk should be traversed. This was done but at a great sacrifice of time and money; on the matter being represented it was decided that only ordinary sub-traverses 30 to 40 chains apart should in future be adopted, the boundary of each taluk being also traversed.

8. The intersection of North Latitude 26° 30′ 00″ and East Longitude 89° 00′ 00″ was adopted as the origin of survey. Connections were made to five principal and four secondary Great Trigonometrical Stations and the error in traverse works out to 4′5 feet per linear mile.

9. The area dealt with contained 11 forest blocks, 97 tea grants and 139 taluks; 3016 sub-traverses in all were run. The theodolite was set up 26143 times, and there are 19604 new station which have been marked with 5527 stones, 785 galvanized iron cylinders, 82 pottery cylinders, 486 pucca pillars, 65 iron posts 13 iron, pegs, 42 wooden posts and 12604 pegs.

10. Azimuth observations were taken at 149 stations, and the mean magnetic variation is East 1° 32′ 18″. There are 3902 linear miles of traversing.

11. There was no demarcation ready when the establishment took the field, but the Deputy Commissioner took the matter in hand and accelerated it. The attendance in the Government Estate was good, and in the Baikunthapur Estate indifferent.

12. The maps of previous surveys utilized for identifying boundaries were those of the Revenue Surveys of 1858-59 and 1865-68 and also the four inch and one inch standard sheets of 1888-92. The work in the 4 forest blocks surveyed and in the northern area generally was carried out with considerable difficulty. Village sites are few and far between and field squads often had to camp out in the open with evil results to the health of establishment generally. The Deputy Commissioner kindly lent two elephants to help in the transport of supplies, &c., but these were barely sufficient to cope with the requirements of the work. I am issuing more tents for the coming field season and hope that these will reduce sickness. The climate of the District is too well known to need comment here. The establishment suffered a great deal from malarial fever and dysentery.

13. The recess office work will be completed before the party takes the field on the 15th November next. The 16 inch plots for cadastral survey have already been made over to the Settlement Department. The order for plotting the tea grants on the 4 inch scale was only recently received and the work is in progress. Duplicate copies of the traverse area tables, prepared by order of the Surveyor-General are ready for despatch to the Settlement Department; these, after the settlement is concluded, will be kept in the Deputy Commissioner's Office.

14. The programme for the ensuing field season is about 1032 square miles and is situated between the boundaries of Bhutan and the Cooch Behar State. The Bhutan-Jalpaiguri boundary will also be traversed and re-demarcated. In addition to the above a new Traverse Section will be started for the Mymensingh and Faridpur Districts, capable of dealing with 800 square miles of the former and 400 of the latter.

PART III.

REPORTS ON MISCELCANEOUS SURVEYS.

Malda District Ghorapakhia Dispute (Ganges Diara).

15. This dispute has been under settlement for some years past, but the claim was demarcated for the first time this year. The area in dispute was 2·8 square miles.

16. A considerable amount of traversing had to be done and the work was based on two Great Trigonometrical Stations. The traverse work was checked against the results of 8 Azimuth observations.

17. The number of traverse stations laid down was 251 and 17 pucca pillars were connected with; 62·6 linear miles of chaining were done.

18. A map showing the claim was prepared and on it the boundaries according to the Revenue Survey were shown; a copy of this map was sent to the Collector of Malda, who now has sufficient information with which to decide the dispute.

Maldoa District: Maldanga Village boundary in dispute.

19. The area in dispute was only 96 acres and the area traversed was nearly a square mile. The Collector of Malda required the village boundary laid down according to its Revenue Survey Map.

20. The traverser deputed for this work was kept waiting for a considerable time before the disputants pointed out their claims.

21. A map showing the boundaries according to the Revenue Survey and the claims of both parties was made and a copy sent to the Collector of Malda who will now decide the dispute.

District Dacca Revision and Marking of Stations.

22. A portion of this work remained over from season 1905-06. Two traversers commenced work on the 6th December 1906. Later in the season it was found necessary to increase this establishment and even then work continued up to the 15th May 1907 when it had to be stopped as the country was flooded; in all 14 villages with 10 sub-traverses could not be completed in revision of angles and distances. These will be seen to when the district is resumed in survey, and in the meantime corrections have been applied in order to supply the plots which have been sent to the Settlement Department.

23. The marking of stations with mounds of earth has been completed except in cases where the country was inundated.

PART IV.

REPORT ON THE BENGAL DRAWING OFFICE.

24. Mr. L. F. Berkeley Extra Assistant Superintendent, 1st grade, held charge until the 10th July 1907, when Mr. P. C. H. Smart, Extra Assistant Superintendent, 3rd grade, took over Mr. Berkeley's duties, the latter being on well-earned privilege leave until the close of the year under report.

25. I consider the present system, by which a part of the Drawing Office work of Eastern Bengal and Assam is done in the Bengal Drawing Office and the remainder in the Shillong Drawing Office to be very unsatisfactory; a sudden increase of work in either province (Bengal and Eastern Bengal and Assam) may easily result in an unworkable situation, and even at present, it is difficult to avoid the interests of the two Provinces conflicting. As suggestions for a separate Drawing Office for this Province have, I understand, been put forward already it is unnecessary to enter further into the matter here.

Standard Mapping Section.

27. In Major Crichton's report for the last year it was stated that of the 29 standard sheets in which the Bakarganj District falls, 22 had been commenced and that the standard mapping of Bakarganj was being expedited, so that as little delay as possible would occur in the publication of the Thana and Trijunction mark maps of the District. The Deputy Surveyor-General however was compelled to reject all this work because it was decided that all standard sheets falling East of Longitude 87° E should be projected in terms of the latest value of the Longitude of Madras, which differs by 2′-27″ from that hitherto used, and also because all standard sheets falling East of Longitude 87° E are to cover 15′ of Latitude and 15′ of Longitude instead 15′ of Latitude and 30′ of Langitude (which was the old size of a standard sheet). Of the rejected sheets 7 were sufficiently advanced to admit of their use for Thana and Trijunction mark maps and the

remaining 15 were so little advanced that their rejection was immaterial. A fresh start having been made, sheets Nos. $79\frac{F}{13}$, $\frac{F}{14}$ and $\frac{F}{15}$ have been commenced No.$79\frac{F}{13}$ is completed and is about to be submitted for publication; the other two sheets are making good progress; in the next year several other sheets will, I hope, be finally dealt with.

27. The Standard sheets of District Tipperah and Noakhali and of the Sarail and Chakla Roshanabad estates are $78\frac{P}{4\&8}$, $79\frac{M}{1\&5}$, $\frac{M}{2\&6}$, $\frac{M}{3\&7}$, $\frac{M}{4\&8}$, and $\frac{M}{12\&16}$, the drawing of the Sarail Estate of the first two being done by the Assam Drawing Office. These sheets are being completed in the old style; the first mentioned has been sent for publication, the next three will be sent for publication shortly and the other two are well advanced.

28. The District map of Chittagong has been completed and sent for publication during the year. Six unpublished proofs of the three standard sheets have also been examined and corrected and the fiscal limits have been coloured on six other unpublished proofs of the same. The index map of District Jalpaiguri and a 2″ mujmili (rough map) of the Jaipur Government Estate (District Bogra) have also been prepared during the year.

Thana and Trijunction Mark Maps Section.

29. The trijunction mark maps of three Thanas of District Bakarganj have been compiled and that of one thana (on 6 sheets) has been prepared, 102 copies being supplied. The Trijunction mark maps of such portions of 6 Thanas of District Tippera, and one Thana of Noakhali District, on which the Sarail and Chakla Roshanabad Estates fall, have been completed and 48 copies of the 6 Thanas of Tippera (on 24 sheets) have been supplied.

30. The Thana maps of Thanas Gournadi, Barisal and Nalchiti of District Bakarganj have have been prepared on 4 sheets during the year and 200 copies of each supplied. 250 copies of one Thana mujmili of District Bakarganj, and 550 of the Thana mujmilis of 5 Thanas of Faridpur (on 11 sheets), sent by the Settlement Officer for reproduction, have been dealt with. In future all thana and trijunction mark maps in Eastern Bengal are to be compiled by the Settlement Officers concerned and the Bengal Drawing Office will simply reproduce the numbers of each required. In this connection I hope shortly, after consultation with the Director of Land Records to arrange that Settlement Officers will be placed, before a cadastral survey commences, in a position to produce accurate thana and trijunction mark maps both more expeditiously and economically than is at present possible.

Reproduction of Village Maps Section.

31. Of Bakarganj District 10915 copies of the work of season 1901 to 1903 remained over to be supplied from last year; these have since been despatched. Of the work of 1903-04 there are 1468 sheets for reproduction; these all had to be traced, and since in some cases two villages were mapped on one sheet, the number of plates vandyked during the year has been 1523; of 1437 of these plated 115613 copies have been made and 109969 supplied. In the 1904-05 area there are 1633 sheets; 575 have been vandyked an 23759 copies of 360 plates have been printed, 20763 copies being supplied. Delay has occurred in this work owing to a calculation having to be made to decide the number of copies of each map required; the Director of Land Records has agreed that in future the Settlement Officer concerned will do this calculation and will issue press orders on the Bengal Drawing Office; this is an arrangement followed in Bengal and the change in Eastern Bengal will relieve the Bengal Drawing Office of an extra establishment as soon as it is effected.

32. The remaining 39 sheets of the Jaipur Government Estate (District Bogra) have been traced, there being in all 183 paper traces of the 187 sheets of the Estate, of each of which 10 vandyked copies are required; 104 traces (1040 copies) have been dealt with this year. Further expenditure on this work is postponed pending receipt of sanction to continue it.

33. No sheets were received during the year for reproduction for attestation purposes. In Faridpur in August last, I examined some of the maps made by the Settlement Officer and did not consider them fit for direct reproduction and for

this season the Settlement Officer has reverted to the old plan of making traces; the reason given by the Settlement Officer for failing to produce sheets which we could have vandyked direct do not concern me, but, in justice to Mr. Jack, I think it fair to say that he has obviously had great difficulties to contend with; bad weather and a damp climate cannot be overcome altogether by the best of human arrangements. At the same time it is necessary to record here some of the disadvantages of the old system; although the Settlement Officer's maps can be traced for attestation purposes and although the expense of this operation will probably not exceed that of a preliminary vandyke edition, yet the finally distributed vandyked copies will not be mechanically made from originals, but from traces, which will have to be made hereafter and which will cost money; the new method is the more economical and both the Director of Land Records and Settlement Officer are taking steps to admit of the vandyking of original sheets in the future.

34. In Jalpaiguri only a small area was experimentally dealt with, and it is hoped that the good results expected in Faridpur next year will be equalled by the Settlement Officer in Jalpaiguri.

35. The following items of miscellaneous reproduction work have also been dealt with by this section :—

(a) 640 copies of 32 sheets of the Sundarbans.
(b) 220 copies of 11 thana mujmilis (rough maps).
(c) 400 copies of a tenure-tree.
(d) 850 copies of 17 circle maps.
(e) 5000 copies of one specimen village map for cadastral amins (Faridpur).
(f) 1000 copies of one specimen village map for cadastral amins (Jalpaiguri).
(g) 45 copies of the mujmili of the Jaipur Government Estate (Bogra).
(h) 20 copies of 2 village maps (Chittagong).

Total 8175 copies.

This aggregate, added to the 142687 reproduced copies already mentioned gives 150862 for that portion of the province dealt with in the Bengal Drawing Office. For Bengal proper 505545 copies of maps were made, so, speaking roughly, it may be taken that about three-tenths of the total reproduction work done in the Bengal Drawing Office concerns the Province of Eastern Bengal and Assam.

Badar Section.

36. The badars of 36 villages of District Bakarganj remained over for correction from last year; those of 473 villages have since been received making a total of 509. These have all been dealt with during the year under report.

37. Correct thana names and revenue survey numbers have been entered in the headings and also the adjoining names in 3113 sheets in District Bakarganj. 109 sheets of the District have also been touched up for reproduction and 16" scales have been entered in black on 2497 sheets.

38. With regard to the obtaining of final names for villages at an earlier stage, I am making certain suggestions based on experience in Bihar to the Director of Land Records, but whether the conditions of Eastern Bengal will admit of the adoption of a procedure similar to that of Bihar, I am not yet certain. If final names can be obtained before cadastral maps are inked up, a reproduction of work will at once occur in this section.

Record Section.

39. During the year this section has received only 10 sheets of District Bakarganj making a total of 14597 sheets received to date for the transferred Districts. The Thanawar and Parganawar registers of 4452 villages have been compiled during the year, making a total of 13234 villages dealt with to date; this work is making steady progress. 678 paper traces have been lodged, after reproduction, making a total to date of 3696 stored in this section.

40. Certain proposals have recently been made by the Board of Revenue, Lower Province, for the improvement of this section of the Bengal Drawing Office;

at present the racks are of wood and are a source of danger both from fire and insects. The scheme under discussion covers the maps of both Provinces now stored in the Bengal Drawing Office, and as soon as I have sufficient information of the wishes of the Board of Revenue, Lower Provinces, I will forward copies of the correspondence to the Board of Revenue for orders ; the maximum possible immunity from risk is, of course, essential, but how far it is immediately advisable, depends entirely on how far the suggested sub-division of the Bengal Drawing Office has progressed.

CHAPTER III.

SERVICES OF OFFICERS.

41. Mr. A. W. Smart has as the Officer-in-charge, No. 6 Party, done unusually good work ; his programme has fallen in both this Province and that of Bengal. In Bengal he has carried out, so far with great success, the survey of the Sundarbans ; in Eastern Bengal, he has completed a difficult programme in Jalpaiguri.

42. Mr. L. F. Berkeley as the Officer-in-charge, Bengal Drawing Office, has done a vast amount of work, which, although not of a conspicuous nature, is none the less useful.

43. Both the above officers, since Major Crichton went on leave, have been freely consulted by me on many points connected with the work of both Provinces ; both have served for well over 30 years in Revenue Surveys and I strongly recommend their services to the notice of the Board.

44. Amongst the junior officers Mr. Judd deserves special mention ; he has worked very hard and well as the officer-in-charge of the traverse operations in Jalpaiguri.

45. The remaining officers have all worked well.

I have the honour to be,

Sir,

Your most obedient servant,

F. C. HIRST,

CAPTAIN, I. A.

Officiating Superintendent of Provincial Surveys Bengal.

APPENDIX I—Part A.

Summary of outturn of work of No. 6 Party in Eastern Bengal during 1906-07.

District.	Traversing.					Remarks.
	Number of Taluks	Linear miles of chaining.	Number of stations at which theodolite was set up.	Number of azimuths.	Number of Sub-traversers	
1	2	3	4	5	6	7
Jalpaiguri	139*(a)*	3902	26143	149	3016	These being disputes or relaying work full figures are not given.
Malda (Gorapakhia) ...	...	63	251	8	...	
Malda (Maldanga) ...	...	...	...	...	...	
Dacca	...	...	...	...	...	

(a) Excludes 97 Tea Grants, and 11 Forest blocks.

APPENDIX I.—Part B.

Statement of outturn and cost rates.

District, Estate, etc.	Description of work.	Estimated area to be dealt with in square miles.	Year of inception of operations.	Area surveyed in square miles.		Cost rate per square mile.		Balance of area remaining for survey.	Estimated cost of completing column 9.	Estimated final cost rate per square mile.	Remarks. (Explanation of unusually high expenditure.
				During the year under report.	Total including previous years.	During the year under report.	From beginning to end of year under report.				
1	2	3	4		6	7	8	9	10	11	12
Jalpaiguri... ...	Traverse for cadastral.	29962	1906	1018	1018	72·2	72·2	1944	...		Mainly linear work for which rates need not be given.
Malda ... ... (Gorapakhia Estate.)	Traverse (relaying work).	3	1904	3	3	...	...	...	...		
Malda ... ... (Maldanga)	Traverse (relaying work.)	1	1906	1	1	...	...	...	...		

F. C. HIRST CAPTAIN, I.A.,
Offg. Superintendent of Provincial Surveys, Bengal.

APPENDIX II.

Statement of sums expended.

District, &c.	Description of work.	Actual (direct) cost.	Expenditure incurred during the year under report.			Total expenditure from inception to end of the year under report.			
			Share of Superintendent of Provincial Surveys pay and cost of his office.	4 per cent. charge for instruments.	Total.	Actual (direct) cost.	Share of Superintendent of Provincial Surveys pay and cost of his office.	4 per cent. charge for instruments.	Total.
1	2	3	4	5	6	7	8	9	10
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Dacca—arrears	Traverse	5,764	312	243	6,329	5,774	312	243	6,329
Bakarganj—Sundarbans	Cadastral ...	77	5	...	82	77	5	...	82
Jalpaiguri—Baikunthapur Estate ...	Traverse ...	30,795	1,694	1,300	33,789	30,795	1,694	1,300	33,789
Do Government Estates ...	Do	36,233	1,992	1,530	39,755	36,233	1,992	1,530	39,755
Do Nepal Boundary (camp) Purnea.	Do	103	6	4	113	103	6	4	113
Malda—Mouza Ghorapakhia	Do	1,140	63	48	1,251	1,959	98	81	2,138
Do Maldanga dispute		364	19	15	398	364	19	15	398
Total ...	Traverse	74,409	4,086	3,140	81,635	75,228	4,121	3,173	82,522
	Cadastral	77	5	...	82	77	5	...	82
Bengal Drawing Office: Standard Maps		6,795	448	...	10,243	18,406	904	...	19,310
Thana Maps		636	35	(a)27	698	975	99	27	1,101
Reproduction Maps		10,704	598	(a)452	11,754	15,069	829	452	16,350
Bodar Section		544	30	(a)23	597	1,827	98	23	1,948
Record Section		609	32	(a) 26	667	609	32	26	667
District Maps		669	36	(a) 28	733	811	43	28	882
Trijunction mark Maps Tippera ...		98	5	(a) 4	107	98	5	4	107
,, ,, Bakerganj ...		128	7	(a) 5	140	128	7	5	140
,, ,, Chittagong ...		44	2	(a) 2	48	44	2	2	48
Reproduction Bogra Maps ...		193	11	(a) 8	212	297	16	8	321
,, Dacca City Maps ...		68	5	(a) 3	76	437	24	3	604
GRAND TOTAL ...		97,374	5309	3,718	1,06,902	1,14,006	6,185	3,751	1,23,942

(a) 4 per cent for instruments charged under orders of controller general.

F. C. HIRST, *Captain, I. A.,*
Offg. Superintendent of Provincial Surveys, Bengal.

FROM

N. D. BEATSON BELL, Esq., C. I. E., I. C. S.,
DIRECTOR OF LAND RECORDS, E. B. & ASSAM.

TO

THE SECRETARY TO THE BOARD OF REVENUE,
EASTERN BENGAL AND ASSAM.

SIR,

I have the honour to submit a report upon the work of the Department of Land Records in Eastern Bengal and Assam during the year ending 30th September 1907.

1. INTRODUCTORY.

1. Except for the first three weeks I was in charge throughout the year. I toured for 232 days, including a month spent in the district of Mymensingh on special duty in connection with an outbreak of agrarian disturbances.

2. From 1st October until 10th. February the Department of Land Records and the Department of Agriculture were under a single officer. By Notification No. 1946 C dated 20th February 1907 published in the Gazette of the 23rd February 1907 the departments were separated with effect from the 11th February. Mr. S. G. Hart assumed charge of the Department of Agriculture while I retained charge of the Department of Land Records.

3. By Government order No. 379 T dated 11th February 1907 the so-called minor settlements in Eastern Bengal, were transferred from the control of the Divisional Commissioners to the control of the Director of Land Records. Only those settlements in which no special staff, not even a single temporary surveyor, is engaged now remain outside the purview of this department.

4. The province of Eastern Bengal and Assam was constituted by proclamation No. 2832 issued by the Government of India on 1st September 1905, and the total area is 1,05,233 square miles. The area with which this department is concerned may however for practical purposes be taken as coinciding with the area administered by the Board of Revenue, namely 76,000 square miles (vide paragraph 10 of the Board's Land Revenue Report for 1905—6). The Board of Revenue and the Director of Land Records are not concerned with the Hill Districts and the Feudatory states. The 76,000 square miles are roughly distributed as follows:—

	Square miles	Land Revenue.
Eastern Bengal—		
Permanently settled	34,000	94 lakhs
Temporarily settled	4,000	29 ,,
Unsettled	6,000	... ...
Eastern Bengal Total	44,000	123 ,,
Assam—		
Permanently settled	6,000	4 lakhs.
Temporarily settled	6,000	57 ,,
Unsettled	20,000	... ...
Assam Total ...	32,000	61 ,,
Grand Total ...	76,000	184 lakhs

The above figures are abstracted from the Board's Land Revenue Report of 1905—6. Owing to differences between the revenue systems of Eastern Bengal and Assam the distribution between temporarily settled area and unsettled area has not, I think,been made upon altogether parallel lines in the two portions of the province. Unleased waste land within the periphery of a Government estate would probably be classed in Eastern Bengal as temporarily settled, while in Assam land of a similar character would be classed as unsettled. In both portions of the province a small amount of revenue-free land has also been classed as unsettled in the above table. The figures however are of general interest and give a fair bird's-eye-view of the situation.

5. In the 50,000 square miles of settled area every variety of land system prevails—from the intricate "tenure-trees" of Bakarganj to the annual tenancies of nomadic squatters in the upper reaches of the Brahmaputra. In Eastern Bengal the land law is comprised in the Bengal Tenancy Act (VIII of 1885) while in Assam the law in force is Regulation 1 of 1886. The Bengal Tenancy Act applies both to the relationship between Government and its tenants and to the relationship between private landlords and their tenants. The Assam Regulation on the other hand, is primarily concerned with transactions between the State and the subject and has no application to the relationship between private landlords and their tenants. In the districts of Sylhet and Goalpara, however, to which the 6,000 square miles of permanently settled land in Assam are confined, the relationship between private landlords and their tenants is governed by Act VIII (B. C.) of 1869. In the other districts of Assam the relationship between private landlords and their tenants is practically a matter of contract.

6. Both under the Bengal Tenancy Act and under the Assam Regulation Government has power, either in permanently settled estates or in temporarily settled estates, to carry out a cadastral survey and to prepare a record-of-rights. Up to now a survey and record-of-rights have been completed in respect of 6,000 square miles in Eastern Bengal and of 8,500 square miles in Assam. In Eastern Bengal two thirds of the operations have been in permanently settled land. In Assam, on the other hand, the operations have been hitherto confined to temporarily settled areas. The task before this department is to prepare a survey and record-of-rights for the entire settled area of both portions of the province, and after such preparation to keep the maps and records up to date by means of a village agency in which the people may have confidence. As this is the first year in which there has been a separate Director of Land Records with functions extending throughout the province I propose to depart in some degree from the usual form of report and, taking up each district in turn, to note briefly what progress has been made in previous years, and what progress in the year under report, towards the ultimate goal of the department. In your letter No. 304 S&S/G dated 29th July 1907 you have communicated the approval of the Board to the simplification, of the appendices of my report, and I trust that the Board will also approve of this simplification of the body of the report. I shall discuss the districts in the order laid down in Government letter No. 43 C., dated 19th October 1906.

II. THE EASTERN BENGAL DISTRICTS.

DACCA.

7. This district consists of 2,782 square miles the whole of which, with the exception of 126 square miles, is permanently settled. Up to now a survey and record-of-rights under chapter X. of the Tenancy Act have been completed in respect of 105 square miles, 95 square miles of which is permanently settled area. A good deal of the existing record is obsolete. For instance, the record of the Talipabad estate (67 square miles) was prepared as long ago as 1894, and it has not been kept up to date.

8. According to the present programme of this department the whole of Dacca district, with the exception of the few areas if any in which the existing record is adequate, will shortly come under survey and settlement. A Notification under the Survey Act (No. 2526 L. R. dated 28th September 1905) has been published for the whole district, and the traverse survey of

1,638 square miles, covering 3,629 villages, was completed by the Professional party in 1905-6. As several seasons must elapse between the traverse survey and the cadastral survey of this area, steps were taken to mark the intermediate stations by galvanized iron cylinders covered with mounds of earth. It was not however possible to complete this work in the entire area (vide para 5 of Major Crichton's annual report for 1905-06).

9. The professional party left untraversed in 1905-6 a strip of land along the bank of the river Padma. The traverse survey of this strip will take place as far as practicable in the present field season (1907-8) and the remainder in the following season (1908–9). In any case the Settlement Officer of Faridpur will take up the cadastral survey and khanapuri of this strip in the field season of 1908-9. The Tenancy Act Notification for Faridpur (vide Bengal Government Notification No. 4891 dated 20th December 1904) has been so worded as to include the riparian area on both sides of the rivers which form the boundary of Faridpur. The work of the field season of 1908-9 will be of the greatest importance to the riparian landlords and tenants of Dacca and Faridpur. Disputes which have existed for generations will, it is hoped, come to a final decision.

10. The cadastral survey of one half of the 1,638 square miles mentioned above will, according to the sanctioned programme, take place in 1909-10 i.e. in the year following the cadastral survey of the riparian strip and the cadastral survey of the remaining half in 1910-11. The rest of the district will be cadastrally surveyed in 1911-12 and 1912-13.

11. Babu Jogendra Kumar Bose, Deputy Collector, has been working as Settlement Officer in Dacca for several years under the supervision of the Collector. He has chiefly been employed on some urgent Government estates and on some scattered private estates in which the landlords had applied for proceedings. During the year under report the work was being wound up with a view to the general operations in the district. At the close of the year there was practically nothing pending except 5 suits under section 105 of the Tenancy Act. There were however 32 pending appeals on the file of the Special Judge.

12. The maintenance of the record was only attempted in respect of 5,865 tenancies in Government estates. The number of mutations recorded during the year was 287, somewhat under 5 percent on the number of tenancies. The Collector reports that the work of maintenance has been carried on by the collecting staff in addition to its own duties and that no systematic field-to-field enquiries have been made. A written application is always insisted on. Except in very special cases tenancies are kept intact between settlement and settlement. Government exercises no veto upon the transfer of holdings. No cash payment is levied for the mutation of names, but in two sub-divisions of the district a stamp of one anna has hitherto been taken upon the written applications for mutation. The Collector proposes in future to realise this fee throughout the district.

MYMENSINGH.

13. This huge district of 6,332 square miles is almost entirely permanently settled. About 225 square miles constitute temporarily settled estates, chiefly alluvial accretions to permanently settled land. Up to now 75 square miles of the district have been finally published under chapter X of the Tenancy Act, of which 60 square miles are permanently settled and 15 square miles temporarily settled.

14. According to the original programme of Government the survey and settlement of Mymensingh district was to be deferred until the completion of Dacca. A series of agrarian disturbances however occurred in Mymensingh in 1906 and 1907 which attracted grave attention from Government. I happened to be in Mymensingh when the disturbances of 1907 broke out and I was placed on special duty for a month in the interior of the district. The enquiries which I made enabled me to support in the strongest manner the proposals which had already been made by successive District Officers and Commissioners for an early Survey and Settlement of the whole district. A scheme has now been sanctioned by the Government of India for the establishment of an additional settlement party which will begin operations in this district. The Traverse Survey

of 800 square miles of Jamalpur sub-division will be undertaken in the coming cold weather (1907—08). An experimental area of some 50 square miles will also, it is hoped, be taken up for Cadastral Survey and Khanapuri in the spring of 1908.

15. A Special Settlement Officer has been working for some years past in Mymensingh upon Government estates and upon private estates in which applications have been filed. In the earlier stages the Settlement Officer was Babu Beni Madhab Chatterji, but since June 1906 the work has been carried out by Moulvi Mahammad Abdul Momin an officer with settlement experience both in Behar and in Bakarganj. The area dealt with amounted to 125 square miles, partly under the Tenancy Act and partly under the old regulations. The attestation of 11,463 interests was completed in the year under report and many difficult rent problems were dealt with, both in private estates and in Government estates. The Settlement Officer appears to have acted throughout with discretion and moderation. Babu Sukumar Sen, an outsider Assistant Settlement Officer, gave much help to the Settlement Officer.

16. I must specially thank Moulvi Mahammad Abdul Momin for the loyal help which he gave me in connection with the enquiries into the rioting in Jamalpur sub-division.

17. There are no Wards' Estates in Mymensingh. As regards the maintenance of the record in Government estates the Collector reports that the collecting agency detects mutations at the time of realising rent. Written petitions with a stamp of one anna have hitherto been insisted on. The Collector is of opinion that Government possesses the right to veto transfers of holdings but he is not aware of any case in which this veto was exercised. During the year under report 140 mutations were recorded in respect of 5,416 tenancies. No field-to-field, or house-to-house, enquiries are made. Mr. Clarke expresses a strong opinion against the levy of stamp duty in the case of applications for mutation.

FARIDPUR.

18. The area of this district is taken as 2,281 square miles, but owing to alluvial accretions it is probably about 2,500. The area which is not permanently settled amounts to some 130 square miles. The whole district is now under Survey and Settlement in accordance with Notification No. 4891 dated 20th. December 1904. Mr. Jack is Settlement officer of Faridpur in addition to similar functions in Bakarganj.

19. The traverse survey of 1,922 square miles of the district was completed in 1904—5 and 1905—6 ; but the cadastral survey was not begun until the season under report (1906—07). A block of 842 square miles was taken up. For the first time on a large scale the cadastral survey and khanapuri were in the hands of the Settlement officer and his staff. Amins on contract pay carried out the actual survey, but no Survey Inspectors were employed. The supervision of survey was entrusted to the Kanungoes and the Assistant Settlement Officers. There were 90 Kanungoes. They were nearly all graduates and under-graduates and were personally selected by Mr. Jack from hundreds of applicants. They went through a course of survey training under professional tuition before entering on their duties. The pay of the kanungoes was Rs. 100 per month. They belong to the class of man from which Deputy Collectors and Sub-Deputy Collectors are selected and they form an admirable recruiting ground for these services.

20. Mr. Jack insisted on a high standard of field check both in quality and in quantity. The maps were examined by Captain Hirst at the close of the season. He acknowledged the adequacy of the checking but he suggested several improvements in the technique of the maps. On the whole the cadastral survey of the settlement staff was accurate and satisfactory. The programme was fully carried out.

21. The staff which conducted cadastral survey also conducted khanapuri. The programme of khanapuri was completed. The feature of this work was the enormous increase in the number of plots and in the number of tenancies compared

with estimates based on the work in Bakarganj. The number of plots rose from 10 to 12½ lakhs and the number of tenancies from 2 to 7½ lakhs. These unexpected figures greatly delayed the completion of khanapuri and the completion of pre-attestation office work.

22. The practice of distributing parchas by the amins during khanapuri was discontinued. Instead, a duplicate of the draft khatian was made over by a kanungo to the tenant concerned, with the area duly entered, before attestation began. This change deprived the amins of a ready source of illicit gain and resulted in a salutary weeding-out of undesirable men.

23. It was the intention of Mr. Jack to carry out attestation in the same season as khanapuri. For this purpose the extraction of areas and the other stages of pre-attestation office work were carried out by a staff at head-quarters as soon as each village emerged from khanapuri. The kanungoes then personally checked each field on the ground and filled up at convenient centres the preliminary entries of rent on the khatians. The Assistant Settlement Officer then finally attested each khatian in presence of the landlord and the tenant.

24. It will be seen that the process of attestation was as thorough as the process of survey. The unavoidable delay in completing khanapuri and the unexpected heaviness in the number of khatians rendered it, however, quite impossible to complete the formidable task which Mr. Jack had set before himself and his staff. A considerable portion of the field-to-field check by the kanungoes was carried out by plunging through deep water. In some villages it was even found necessary to work in boats. Although the work of attestation was prolonged to the middle of September about 60 per cent of the khatians remained unattested at the close of the season. It is true that the field-to-field check by kanungoes, and the preliminary entries on the khatians were practically complete throughout the area, but considering the climatic conditions under which a good deal of this work was conducted it is probable that some of it will require to be done again. When I visited Faridpur in August the work of attestation and field-to-field check was in full progress. I assembled a council-of-war of fourteen Assistant Settlement Officers and discussed with them in all its aspects the question whether attestation should or should not be attempted in the same season as khanapuri. At the close of the discussion I took a vote of the members. It is interesting to note that seven officers voted each way and that some of the best and most experienced officers voted on each side.

25. I fully recognise the advantages which are to be gained from completing attestation in the same year as khanapuri, and I quite see that many exceptional difficulties presented themselves in the season under report. The dry season in Eastern Bengal is however so short and the country is so liable to inundation that there is practically no margin for unforeseen contingencies and it is certain that, if we attempt to complete attestation in the same season as khanapuri, we shall find in almost every year that we have either to abandon our programme unfinished or else to finish it under conditions which are not only incompatible with accurate work but are dangerous to the health and lives of the staff.

26. The highest praise is due to Mr. Jack and his staff for the dogged determination with which they attacked their almost impossible task. Mr. Briscoe was Mr. Jack's assistant in the earlier part of the season. He showed much promise. When he went on leave he was succeeded by Mr. Woodhead who quickly mastered the details of settlement work, but broke down under the strain and has gone home in bad health. Mr. Jack also brings to notice the excellent work done by Babu J. N. Roy, Deputy Collector, and by Moulvi Kabiruddin Ahmad and Babus Sital Chandra Chatterji, Madhu Sudan Das and Sudhir Chandra Ghosh Sub-Deputy Collectors. Babu Nil Moni Chatterji of the Survey Department who was attached to the Settlement party as professional adviser was most loyal and useful and did an enormous amount of work in spite of indifferent health.

27. As regards the maintenance of the record in this district the Collector submits figures in respect of Kalkini and Basu Deb Roy, two estates which were surveyed and settled under the Tenancy Act before the district operations. During the year under report 392 mutations were recorded in respect of 6786 tenancies.

The work is carried on by the collecting agency without field-to-field or house-to-house enquiries. Written petitions are taken but no stamp duty is levied.

BAKARGANJ.

28. This district comprises 3,750 square miles, exclusive of large rivers. The permanently settled area makes up 2272 square miles and the temporarily settled area 1478. More than one-third of the district is therefore temporarily settled. The land revenue of the district is about 17 lakhs, of which 10 lakhs come from the permanently settled area. The whole district is now under Survey and Settlement. The estates of Dakhin Shabazpur, Tushkhali, Heshamabad &c were surveyed and settled under the Tenancy Act between the passing of that Act and the inception of the district operations. The settlement officer in most of these preliminary operations was Babu P. M. Basu who remained on the staff of the settlement officer in the district operations. I was settlement officer of the district from November 1900 till March 1905 when I gave over charge to Mr. Jack who has held the post since then.

29. The operation is now approaching completion. During the year under report the programme consisted of the preparation of the final record, final publication, case work under sections 105-106, settlement of land revenue under section 104 and recovery of costs under section 114.

30. Three-fourths of the record has now been finally prepared and finally published. Mr. Jack estimates that this work should be completed by March 1908.

31. As regards case work the institutions up to date have been 6918 under section 105 and 5874 under section 106. No work was done in the year under report in respect of section 105. The only disposals up to date are therefore 492 cases which I disposed of personally in 1904. A balance of 6426 cases remains. Under section 106 the disposals during the year amounted to 1983 and the outstanding balance to 3891. New institutions will come in under both sections as the remainder of the record is finally published. In the coming season the staff of judicial officers will be increased as occasion requires and every effort will be made to keep abreast of the institutions.

32. Although more than one-third of the district is temporarily settled it is only in respect of 558 square miles, with an existing land revenue of 4 lakhs of rupees, that a resettlement of land revenue is now being made. In the remainder of the temporarily settled area the estates are not ripe for resettlement and the operations have therefore been confined to the preparation of a record-of-rights. It is of interest to note here the area and the existing land revenue in the tract under resettlement of land revenue in Bakarganj compared with the corresponding figures for the districts under resettlement of land revenue in Assam.

	Area under resettlement.	Existing land revenue.
Bakarganj	558 square miles	4 lakhs
Nowgong	345 square miles	4½ lakhs
Darrang	472 square miles	7 lakhs

33. Of the 558 square miles under resettlement 453 represent Government estates and 105 temporarily settled private estates. Rents have to be determined for 29,509 tenants in Government estates and for 20,021 tenants in private estates. During the year under report fair rents were determined for 14854 tenants. The general tendency of the revision of rents has been to maintain unaltered, or but slightly increased, the rents of cultivating raiyats; and to take a fair increase from tenureholders. Those tenureholders however who reside upon their tenures or who have spent money upon their improvement have been accorded preferential treatment.

34. As regards recovery of costs under section 114 of the Act the terms of the Goverment order were slightly modified during the year under report. Revised rules for recovery were issued by Government letter No. 266 T. dated 6th January

1907. The main principle of the revised rules is that each raiyat should pay one anna in the rupee on the rent which he pays and that each tenure holder should pay three annas in the rupee on the rent which he pays. The balance which remains for recovery will be paid by the zamindars in proportion to the nett profits of their estates. As the rules are of general interest I have reproduced them *in extenso* as appendix D of this report. Altogether, about 14½ lakhs of rupees have to be recovered from landlords and tenants. The total realisations up to date amount to nearly 7 lakhs. The cost of computation and recovery has so far worked out to 5 per cent. on the collections. During the year under report the realisations amounted to Rs. 5,08,248. The sums paid by raiyats amounted to Rs. 1,48,226, of which only Rs. 295/- were realised by certificate procedure; while the payments by tenureholders came to Rs. 3,53,501 of which Rs. 6,156/- were realised by certificates. Of 294,490 payments during the year as many as 293,975 were voluntary—that it is to say, for one payment upon compulsion there were 569 amicable payments. This is strong testimony of the value which the people set upon the khatians and printed maps which are distributed by the recovery officers.

35. A question was raised in the Legislative Council on 6th. February 1907 as to whether it was right to go on with the recovery of costs in Bakarganj in a year when the price of rice ruled high. The figures given in last paragraph fully justify the determination of Government to proceed with the work of recovery. I have only to add that the Settlement Officer has acted up to the promise given by the Lieutenant Governor in the Legislative Council and has made arrangements for payment by easy instalments in all cases in which real hardship would be caused by a lump payment. During the year under report the instalment system was granted in respect of demands amounting to the large total of Rs. 89,258.

36. Rai Pyari Mohan Basu Bahadur was the Senior Assistant Settlement Officer in Bakarganj during the year and he was in charge of the work when Mr. Jack was absent in Faridpur. His tact and ripe experience continued to be of great value to the Department. Babu Harkisor Biswas and Babu Abani Chandra Chatterjee did much thorough work in connection with the assessment of land revenue.

37. I now turn to the maintenance of the record in Bakarganj. A scheme for the district as a whole will not be prepared until an experiment has been made in Chittagong, but meanwhile the Collector maintains the record by his Tahsil staff in those Khas Mahals and Wards' Estates in which a record already exists.

38. Mr. Hughes Buller gives the following figures regarding the record of mutations during the year :—

	No. of tenancies.	No. of mutations recorded
Khas Mahals	7,347	1166
Court of Wards	12,193	2114
Total ...	19,540	3280

The main feature of the mutation work in Bakarganj is that almost all mutations are recorded when the tenants come to pay their rent and that verbal applications for mutation are freely accepted both in Khas Mahals and in Wards' Estates. When petitions are presented for mutation no stamp duty is levied either in Khas Mahals or Wards' Estates. Mr. Hughes Buller makes many interesting comments upon the system of maintenance in Bakarganj. His remarks are the more interesting in view of his recent work in Chittagong. I regret that I have not space to reproduce all his remarks, but I quote his final observations—

"Now that the Settlement is approaching completion, all those who have experience of it agree that it will be the greatest pity if steps are not taken to maintain it. I am convinced that the maintenance of the record will be more instrumental in the pacification and better administration of the district than any other administrative reform. Already the results of the Settlement are marked by a decrease of some 50 per cent in the number of riot cases."

CHITTAGONG.

7/3

39. The district of Chittagong consists of 2492 square miles of which ~~1700~~ square miles are permanently settled. This district resembles Sylhet in that the permanent settlement was made upon the basis of a survey and that an attempt was afterwards made to tie the Zamindars to the surveyed area. The land which Government rescued from the permanent settlement is known in Chittagong as Noabad and in Sylhet as Illam. In both cases Government Estates lie in patches throughout the district. The district of Chittagong was brought under survey and settlement by Mr. Allen in 1888—1898. It is now proposed to revise the maps and records and to institute a regular system of maintenance by a village agency. Mr. Hughes Buller was on special duty in this connection for some months in the year under review. He has prepared a most valuable report which will shortly be submitted to the Board.

40. Meanwhile the Collector carries on the maintenance of the record in Khas Mahals and Wards' Estates by means of his Tahsil staff. In 89,967 tenancies in Khas Mahals 2,253 mutations were recorded during the year, while in 19,154 tenancies in Wards' Estates 755 mutations were recorded. No systematic field-to-field or house-to-house enquiry is made. The Collector reports that verbal applications for mutation were formerly accepted but that written applications with a one anna stamp are now insisted on in every case. Government exercises no veto upon transfers.

TIPPERAH.

41. The area of this district is 2499 square miles of which the temporarily settled area is only 95 square miles. Up to now an area of 858 square miles, equal to more than one-third of the district, has been finally published under the Tenancy Act. The bulk of this area, namely 735 square miles out of 858, consists of permanently settled estates. The most noticeable work in this district has been the Survey and Settlement of Chakla Roshnabad by Mr. Cumming in 1892-99.

42. As regards maintenance of the record in Government Estates, Government exercises no veto on transfers of holdings and the sub-division of holdings seems to be allowed. The work of mutation is carried on by means of the Tahsildars. Verbal applications are accepted, but when a written petition is filed a stamp of one anna is taken. No field-to-field or house-to-house enquiry is made. In the Government estates of Tipperah 110 mutations were recorded in respect of 11730 tenancies.

43. In the Wards' estates of this district the Tahsil staff also carried out the work of mutation. There was a similar absence of local enquiries. In the Bhukailas Estate the management contests the right of the raiyats to transfer their holdings. This state of affairs naturally militates against progress in the work of mutation. In this estate a mutation fee of one rupee is levied in the case of sales. In the Sarail estate it has been proposed that the management should allow the transfer of entire holdings but not the transfer of part-holdings. It has also been proposed that the mutation-selami which was realised in the time of the proprietor should be abolished during the management of the Court. In the Wards'estates of the district 889 mutations were recorded in respect of 67,739 tenancies.

NOAKHALI.

44. The area of the district is 1,644 square miles of which 184 are temporarily settled. Up to now records-of-rights have been finally published in respect of 427 square miles of which 200 square miles relate to permanently settled estates. A portion of the Roshnabad estate of the Tippera Collectorate measuring 129 square miles, lies within the district of Noakhali. This area was surveyed and settled along with the area which lies in the district of Tippera. Since then many estates, both permanently settled and otherwise have been taken up in this district under Chapter X of the Tenancy Act. Altogether more than one quarter of the district has already been completed.

45. During the year under report various private estates and Government estates were being dealt with by Babu Sarat Chandra Basu, the Assistant Settlement Officer. There were estates at almost every stage of work and in almost every part of the district. The most difficult work lay in Parganah Nij Sandip which is being surveyed and settled upon the application of the proprietors. The proprietors desire to increase the rent of the tenure-holders under Section 105. The tenure-holders maintain that their rate of rent is fixed in perpetuity. The contest will certainly proceed to the High Court, if not to the Privy Council.

46. On the whole the programme of work was carried through with commendable promptitude. Case work under Sec. 105-106 however showed a tendency to become congested towards the close of the year.

47. As regards maintenance of the record the Collector reports that 638 mutations were recorded in 7362 tenancies. The work of mutation is carried on by the Tahsil staff and no field-to-field or house-to-house enquiries are made. At the time of collecting rent the Sub-Tahsildars ask the raiyats whether any change has taken place, If any change comes to light a report is sent to the Tahsildar. No written petition is insisted on, but if one is filed a stamp of one anna is levied. The Tahsildar then takes up a formal mutation case and issues notices calling for objections. For the settlement of waste land or abandoned holdings a staff of "enquiring Sub-Tahsildars" is employed. These officers also make enquiries regarding mutations and thereby supplement the enquiries made by the ordinary Sub-Tahsildars in the course of rent-collection. The Collector is satisfied with the system.

48. In the case of Wards Estates the Collector reports that a mutation fee of one rupee is levied in cash when the mutation is allowed.

RAJSHAHI.

49. This district consists of 2593 square miles of which 29 are temporarily settled. Up to now records of rights under the Tenancy Act have been finally published in respect of 68 square miles, all of which relate to permanently settled area. A small portion of the Sankerpur Estate which was surveyed and settled from Dinajpur now lies in this district. This outlying area has been included for the present in Dinajpur as I have not received separate figures for it. The bulk of the existing records are obsolete. The Dubalhati estate (59 square miles) was surveyed in 1888-91 and no attempt has been made to keep the maps and records up to date.

50. I was under the impression until after the close of the year that there were no pending surveys and settlements under my control in the district of Rajshahi. I now find that 23 square miles were being surveyed and settled during the year and that a temporary staff of 5 amins and chainmen was engaged to assist the ordinary staff of the Collector. The work was treated as out side my control and no returns were sent to me during the year. It is apparent that the Collector has misunderstood Government order No. 379 T dated the 11th February, 1907. I am drawing his attention to the matter. The Survey and Settlement of these 23 square miles were being carried out under Rgulation VII of 1822. The bulk of the Survey and Khanapuri was completed and progress was made in the determination of fair rents. Whether the requirements of the law and the Settlement Manual were complied with cannot be ascertained from the materials before me.

51. As regards maintanance of records in the Khas Mahals the Collector reports that the Tahsil staff carries out the work in addition to its own duties and that no field-to-field or house-to-house enquiry is made. Written applications, bearing a stamp of 8 annas, are insisted on in every case. It is further stated that the transfer of holdings is not recognised in the Government estates of Rajshahi, a statement which seems to require elucidation. From the Board's Land Revenue Report of 1905-6 it appears that there are 21 square miles of the district under direct management with a land revenue of Rs. 6170. Figures for

mutation work have only been submitted in respect of Bulanpur estate. In that estate there are 7 tenancies and one mutation was effected. Mr. Bentinck reports that he was unable to make any personal inspection of Khas Mahals during his tours. It is therefore rather difficult to ascertain the exact state of mutation work in this district.

DINAJPUR.

52. This district consists of 3946 square miles. The whole district, with the exception of 72 acres, is permanently settled. The permanent settlement is therefore far more complete in this district than in any other district of the province. Up to now a record of rights under the Tenancy Act has been finally published in respect of 491 square miles of the district, entirely in permanently settled land.

53. Seven private estates, comprising an area of 10 square miles, scattered over different parts of the district, are now being dealt with under chapter X of the Tenancy Act, the officer in charge being Babu Rebati Mohan Chakrabartty, a Deputy Collector on the district staff who had settlement experience in Bakarganj. In all the seven estates the cadastral survey and khanapuri had been completed before the year under report. The programme therefore consisted of work in the stages from attestation onwards. Good progress was made. The only estate in which attestation is still incomplete is the estate of Balu chara. In this estate one of the applicant proprietors died and the proceedings were stayed in order that a guardian might be appointed to represent the minor. It is hoped that the work of all the seven estates, including the estate of Baluchara, will be completed during the coming field season (1907—08).

54. All the estates mentioned above were taken up on the application of the proprietors. Several more applications have been received in this district and if these applications are granted there is every probability that further applications will come in and that a large portion of the district may soon be under survey and settlement. For the present the only new application which has been granted relates to $15\frac{1}{2}$ square miles in the Thakurgaon Sub-Division. The estate in question, Jhargaon, is under the management of the District Judge and he has made a strong request for the early inception of proceedings. Arrangements are therefore being made for the immediate survey and khanapuri of the estate. Babu Rebati Mohan Chakraburtty will take up the work in addition to the work of winding up the seven estates.

55. As regards the maintenance of land records the Collector reports that there are 14 tenancies in the 73 acres of Khas Mahal and that no mutations were recorded during the year,

56. In the Wards Estates the work of maintenance was confined to the Churaman estate. This estate, as already mentioned, lies partly in Dinajpur and partly in Rajshahi. It was surveyed and settled in 1887-89. The proprietor was then a minor and the estate was under the Court of Wards. Soon afterwards the proprietor attained his majority and managed the property for 12 years. During this period he took no steps to maintain the record. He died in 1899 and in the following year the Court of Wards resumed charge of the estate.

57. The Court of Wards now attempts to keep the record up to date. The record was one of the first which was prepared under the Tenancy Act and was probably never very accurate. Moreover when the Court of Wards took charge in 1900 it must have been quite out of date. The work of maintenance is therefore carried on under great difficulties, and cannot be at all satisfactory. The Collector reports that the Circle officers of the estate and the amins under them make field-to-field and house-to-house inquiries and that the collecting staff helps them as far as possible. Mutations have not, however, been recorded at the time of payment of rent. The Collector thinks that such a procedure would entail loss of time and would interfere with collection work. It is noteworthy that in other districts it has been possible to do a good deal of preliminary maintenance work at the time of rent collection.

58. In the case of sale, partition or gift a fee of one rupee is levied in cash from all applicants for mutation. In the case of inheritance no fee is realised. Printed forms of application are supplied to the raiyats. No stamp is taken on the application. No veto is exercised upon the transfer of holdings.

59. During the year under report 2678 mutations were recorded in the Churaman estate. This works out to about 9 per cent on the 29,972 tenancies which make up the estate. The percentage is high considering the fact that a mutation fee of one rupee is levied in cases other than inheritance. About two-thirds of the mutations related to inheritance and one third to other causes.

JALPAIGURI.

60. This district eonsists of 2960 square miles. About one third of the district is made up of permanently settled Zamindaris while about two-thirds constitutes the tract known as the Western Duars which was ceded to the British Government in 1866. The Western Duars are temporarily settled. The Bengal Tenancy Act is in full force in the Zamindari area of the district. In the Western Duars the position is peculiar. By Notification No. 964 T. R. dated 5th November 1898, which was issued by the Bengal Government with the approval of the Government of India, the Bengal Tenancy Act is excluded from lands held for the cultivation of tea and from lands held on Waste Land leases ; but the Act, including chapter X, is in force in the area for which regular leases were granted at last settlement, subject however to the terms of such leases and to the rights and obligations of tenants as defined in the settlement proceedings. The last settlement was made under the Bhutan Duars Act (XVI of 1869) which has since been repealed. The leases which were then granted and which, in accordance with the Notification of November 1898, will override the Bengal Tenancy Act, give power to Government on the expiry of the settlement to give new leases to the tenants upon such rent and on such conditions as Government sees fit.

61. No record of rights has hitherto been prepared in the zamindari portion of Jalpaiguri. The last settlement of the Western Duars was made in 1889-95 by Mr. Sunder, Deputy Collector. As the settlement is about to expire, the Western Duars have been brought under resettlement and Mr. Milligan has been appointed as Settlement Officer. Advantage was taken of the opportunity offered by the presence of a settlement party in the district to undertake a survey and record of rights in the Baikanthapur Wards' estate which makes up nearly three-sevenths of the zamindari area of the district. The usual Notification was accordingly issued under the Bengal Tenancy Act (No. 12225 dated 28th November 1906) and the work was entrusted to Mr. Milligan along with the resettlement of the Western Duars. As operations had thereby been inaugurated in by far the greater part of the district, it became evident that the whole district should be included within the scope of the undertaking. The Government of India has therefore been addressed by this Government with a view to the extension of the proceedings to the whole of Jalpaiguri. It has also been suggested that the settlement party now working in Jalpaiguri should gradually extend its operations through the whole of the Rajshahi Division.

62. Owing to the peculiar state of the land law in the Western Duars, as described above, some difficulty was felt in the selectfon of an Act under which the present record of rights for that tract should be prepared. For the present the operations are being conducted under the Bengal Survey Act and under an executive proclamation (vide Notifications Nos. 12223 C dated 28th November 1906 and No. 12222 c dated 28th November 1906). It is probable however that a further Notification will shortly be issued which will give a more definite legal basis to the record now about to be prepared.

63. During the year under report the Survey Depertment carried out the Traverse survey of the first block of the district (1018 square miles), while Mr. Milligan carried out the cadastral survey and khanapuri of an experimental area of 69 square miles. This area lay partly in the Western Duars and partly in Baikanthapur. The supervision of cadastral survey was entrusted, as in Faridpur,

to a staff of Kanungoes. The experimental khanapuri gave much valuable information which will enable the Settlement Officer to frame his working rules for the remainder of the district. During the coming season (1907-08) the attestation of the experimental area and the cadastral survey and khanapuri of the first block will be undertaken. In view of the unhealthiness of the Western Duars I would strongly deprecate any attempt to carry out attestation in the same season as khanapuri.

64. Mr. Milligan has approached his task with vigour and he has been ably seconded by Messrs Harris and McDermott, Deputy Collectors and by Babu Rajani Kanti Gupta an outsider Assistant Settlement Officer. The staff will of course be strengthened in the coming field season. I have every confidence that they will carry through the programme.

65. In view of the approaching preparation of an up-to-date record of rights in the Western Duars the work of maintenance in that area is not at present of great importance. The Deputy Commissioner has however furnished a statement showing that 2500 mutations were recorded in the year under report in respect of 25981 tenancies. The proportion of mutations to tenancies is therefore nearly 10 per cent. At present no field-to-field or house-to-house enquiry is made. Written applications are insisted on in every case. Both a stamp duty and a court fee are levied. The stamp duty is one rupee in the case of sale and eight annas in the case of inheritance; while the cash fee is one anna per acre in the case of sale and half-an-anna per acre in the case of inheritance. It is probable that the system will be thoroughly revised by Govern ment on the conclusion of the present settlement.

66. In the Baikanthapur Wards' estate no accurate records are yet in existence and it has therefore been found useless to inaugurate a system of maintenance. The number of tenancies in this estate is returned as 4670, and only one mutation was recorded during the year.

RANGPUR.

67. Ther area of this district is 3492 square miles. Only 6 square miles are temporarily settled. Next to the permanent settlement of Dinajpur the permanent settlement of this district is therefore the most complete in the province.

68. Four private estates with a total area of 106 square miles have recently been under survey and settlement in this district upon the application of the landlords concerned. Before this, no land in the district had been taken up for survey and settlement since the passing of the Tenancy Act. The work in the four estates has been completed in a creditable manner by Maulvi Izhar Husain, Deputy Collector. He has submitted an interesting report which is now in the press and will shortly be forwarded to the Board with my comments. The report will be of considerable help to Settlement Officers throughout the Rajshahi Division. No one except those who have tried it, can realise the difficulty which is felt by Settlement Officers in Eastern Bengal in fitting the existing tenancies into the artificial classification of the Tenancy Act. The difficuly is specially great in the Rajshahi Division where the land system is based on the wellknown grades of *jotdar chukanidar,* and *adhiar.* These grades form part of the agricultural conscience in the people and cannot be ignored; but the problem of classifying each *jotdar, chukanidar,* and *adhiar* as a tenure-holder, raiyat, or under-raiyat is wellnigh insuperable. Maulvi Izhar Husain attacked this problem with courage and discretion and his experience cannot fail to be of use to others. I am glad to say that his services will be available on the staff of Mr. Milligan in Jalpaiguri.

69. As regards the maintenance of the record in Government estates, there are 480 tenancies in such estates in this district. Only 8 mutations were recorded during the year, three of which were in consequence of auction sales. The rents of these estates are collected by the Nazirs on the district staff. The work of mutation is part of their duties.

70. Apparently there has been no regular system for maintaining the record in the Wards' estates of this district. The only Wards' estate which has any record prepared under the Tenancy Act is Tajhat estate. The record in question was

recently prepared for Lot Kaya (17 square miles) in that estate. This area was dealt with by Maulvi Izhar Husain. The record of rights was prepared with a view to partition between the ward and his cosharers.

BOGRA.

71. The area of this district is 1359 square miles of which 44 are temporarily settled. Up to now 85 square miles have been finally published under chapter X of the Tenancy Act, namely 43 square miles in temporarily settled estates and 42 square miles in permanently settled estates.

72. There was no Survey and Settlement in progress during the year under report. In the coming season however operations will be undertaken in Fulbari and Ramchandrapur, the landlords of these villiages having applied for a Survey and Settlement (vide Notification No. 8784c dated the 29th July 1907).

73. The work of maintenance in this district is confined to the Jaipur Government estate. This estate lies partly in Bogra (42 square miles) and partly in Rajshahi (2 square miles). The estate was surveyed and settled in 1893-98, by Mr. S. S. Day, Deputy Collector. The Collector has given an interesting account of the system of maintenance which now prevails. The estate is managed by a Deputy Collector and is divided into 10 collecting circles. Each circle is in charge of a patwari. The patwaris make house-to-house enquiries in the villages and report to the Manager, in a printed form, all mutations whfch come to their notice. Written applications bearing no stamp are taken from the incoming tenants. Apparently no mutation fee is levied. In the course of his tours the manager is required to test the names in 50 per cent of the jamabandi entries. In the year under report he tested 93·5 per cent of the entries. No veto is exercised by Government on the transfer of holdings, but the subdivision of holdings is not allowed between settlement and settlement.

74. In addition to the Patwaris there is an enquiring Kanungo who is a passed student of the Dacca Survey school. He is employed on matters which require special knowledge of survey, such as enquiries in connection with the settlement of waste land, enquiries about diluvion &c.

75. Vandyke maps of each village are now being printed with a view to assist the staff in the work of maintenance.

76. During the year under report 540 mutations were reported in respect of 7358 tenancies. On paper the result (7 per cent.) is smaller than in some other districts, but if the system on the ground corresponds with the system described in the reports it should be one of the most efficient in Eastern Bengal. I shall take an opportunity of inspecting the work in the coming field season.

PABNA.

77. This district consists of 1839 square miles, of which 113 are temporarily settled. Up to now 29 square miles have been finally published under chapter X of the Tenancy Act, of which 3 square miles relate to permanently settled and 26 to temporarily settled area.

78. A good deal of survey and settlement is in progress in this district, both under the old regulations and under the Bengal Tenancy Act. Altogether ten square miles are in hand and the work is at various stages. In some cases the work has been taken up at the instance of Government and in other cases on the application of parties. On the whole there was good progress throughout the year. The work was carried out by Babu Radhika Lal De, Sub Deputy Collector. Babu Kali Mohan Sen a Deputy Collector on the staff of the District officer had previous settlement experience and gave assistance in settlement matters.

79. The most interesting case in the pending file is probably the small estate of Mirkutia Digar. It was brought under survey and settlement owing to a rent dispute between the Nawab Bahadur of Dacca and his tenants, and was under my control even before Government order No. 376T dated the 11th February 1907. With a view to bring about a compromise I visited the estate on one occasion and

twice held conferences with the tenants at Pabna. I am glad to report that at last a compromise seems to have been effected. It only remains that I should spend a few days in the estate in order to try personally the suits under section 106. It was on this understanding that the tenants accepted the rates of rent. I should mention that the estate lies within the Serajganj Sub-Division of which I was formerly Sub-Divisional Officer.

80. As regards the maintenance of the record in Government estates in Pabna there is no special staff for the work, and little seems to have been done at the time of rent-collection. Written applications are always insisted on. In the Sadar Sub-Division these applications used to be accepted with a stamp of one anna and in the Serajganj Sub-Division with no stamp at all ; but apparently a stamp of 8 annas is now taken throughout the disirict. It is not clear however whether stamp duty is taken in the case of mutation by inheritance. No cash fee for mutation is taken in this district. Generally speaking transfers of holdings are rocognised by Government, but Mr, Craven seems to have refused to recognise some transfers in Serajganj Sub Division which were made without his permission. The Collector reports that applications for mutation were formerly taken at the Sadar, but he has recently introduced the practice that such applications should only be taken in the estate. The applications are received when he or the Deputy Collector goes on tour. If every estate is visited once a year by the Collector or Deputy Collector the change of system is a great move in the right direction. During the year under report only 53 mutations were recorded in respect of 16353 tenancies. As Mr. Mookerji, the Collector takes much interest in this branch of work better results may soon be excepted.

81. There is no Wards' Estate in this district.

MALDA.

82. The area of this district is 1899 square miles of which 39 are temporarily settled. Up to now 43 square miles have been finally published under chapter X of the Tenancy Act, all of which relate to permanently settled area.

83. The Survey and Settlement of 31 square miles of the district was in progress during the year under report. The proceedings were all being taken with a view to the resettlement of land revenue. I found that all the proceedings were conducted under Regulation VII of 1822, but at my suggestion some of the cases will be taken up *de novo* under the Bengal Tenancy Act.

84. A mistake was being made in this district in the matter of procedure. It was assumed that in operations under Regulation VII of 1822 it is not necessary to carry out attestation or to make a record of existing rights. It is of course equally necessary to do so whether the proceedings are under Regulation VII of 1822 or under the Bengal Tenancy Act. In the coming season attestation will be carried out and the rate-reports which are submitted will be based upon the existing facts which have been ascertained at attestation.

85. In addition to the estates in which land revenue is being resettled it is not improbable that proceedings will shortly be taken in respect of certain lands belonging to Maharaja Surja Kanta Acharya. He has presented an application for survey and settlement under chapter X of the Tenancy Act. The lands measure about 2 square miles.

86. The pending settlements of this district present many points of unusual interest connected with Deara Law and the determination of fair rents. Babu Rash Behari Mookerji, Sub Deputy Collector, is in charge of the operations. He has previous experience of settlement work in Midnapur and elsewhere. He evinces much interest in the work. I should add that he is not responsible for the defective procedure noted above.

87. As regards maintenance of the record the Collector reports that there was practically no mutation work during the year as all the more important estates were under resettlement. In the 5043 tenancies of the Khas Mahals only 10 mutations were therefore recorded during the year. The collecting staff is responsible for the work of mutation. Written applications are taken in every case. If the incoming tenant is a Khas Mahal raiyat a stamp duty of one anna is levied, and if he is an outsider a stamp duty of 8 annas is levied. No cash payment is taken in addition to the stamp duty.

GENERAL REMARKS ON EASTERN BENGAL.

88. I have now given an outline of the situation in respect of Survey and Settlement work, and in respect of the maintenance of the record, in each district in Eastern Bengal. It will be seen that in every district some advance has been made towards the goal of the department. There is not a district in which some Survey and Settlement has not been effected and there is not a district in which some attempt is not made to keep the record up to date in so far as it relates to Government estates and to estates under the Court of Wards. The general impresssion created by a perusal of the district reports is an impression of uneven treatment without any adequate reason for such unevenness. In a few districts Survey and Settlement operations have been undertaken upon an extensitive scale while in other districts very little is now being done in this direction or will be done during the official lifetime of the present generation of administrators. I would suggest that the time has arrived for reconsidering the whole Survey and Settlement programme in Eastern Bengal. It may be that instead of the present plan of taking up a few entire districts by means of special staffs recruited elsewhere, it would be wiser from an ecomomical, an administrative and above all a political point of view to inaugurate proceedings on a small but systematic scale in every district of the province, to place the work under the direct control of the District Officer, to prepare the initial map and record by a genuine local agency, and to utilize the same local agency in the future for the maintenance of the record. The subject is too large and too important to be dealt with in a paragraph of an annual report. I shall address a separate communication to the Board of Reven ue and shall suggest that the question be considered at a conference composed of the most experienced revenue officers in Eastern Bengal.

89. What is chiefly noticeable in the district reports regarding the maintenance of the record is the general absence of systematic field-to-field enquiries and the great diversity of procedure in the matter of stamp duty and mutation fees. So long as the collecting staff has to carry on the work of maintenance in addition to its own duties, it is hardly possible to expec a thorough field-to-field enquiry. The question of stamp duty and mutation fees might however be dealt with now. My personal opinion is that stamp duties and mutation fees should be discontinued throughout the province and that the collecting agency should be encouraged to report for necessary action all mutations which come to their knowledge either on written or on verbal information. The only mutation fees which might continue to be realised are the mutation fees authorised by sections 15—18 of the Tenancy Act.

CHAPTER III.

WORK IN THE ASSAM DISTRICTS.

90. I now turn to the Assam districts. The permanently settled area of those districts has as yet no cadastral maps and no record of rights. The bulk of the temporarily settled area has however been cadastrally surveyed and the maps and records are kept up to date each year by an agency of village-recorders. In the Assam valley the recorders are known as Mandals and in the Surma Valley they are known as Patwaris. The average number of fields assigned to a recorder is 2565 in the Assam Valley and 5,724 in the Surma Valley. In both valleys the recorders speak of the area assigned to them as their "lots." This expression may, I think, be adopted by us. The lots of the recorders are grouped into "circles", each circle being in charge of a resident Sub Deputy Collector. Each Sub Deputy Collector is assisted in his work by a few Supervisor Kanungos. The circle system has not yet been fully established in all districts. The number of lots in a circle at present averages 36, while the number of lots in a Kanungo's subcircle at present averages 17.

91. The recorders and the kanungos have no connection with the realisation of land revenue. They prepare, under the supervision of the Sub Deputy Collector, the annual demand of each village. The revenue is collected and paid into the Treasury by the Mouzadar, who is an ingenious compromise between a zamindar and a tahsildar. The Mouzadar resides within his Mouza. He is appointed by the Deputy Commissioner, subject to the approval of the Commissioner; and he can be dismissed or suspended with the sanction of the Commissioner. On the other hand the office of Mouzadar is, as far as possible, hereditary. The successor of a Mouzadar is ordinarily selected from amongst the members of his family. The Mouzadar is remunerated by a percentage on his collections. The "Mouza" is a group of cadastral villages. On the average there are eleven Mouzas within the circle of a Sub Deputy Collector while on the other hand there are 3 recorders' lots within a Mouza. The recorder is directly subordinate to the Kanungo and Sub Deputy Collector and not to the Mouzadar.

92. Where the circle system has not yet been fully established the Sub Deputy Collector is still concerned with the collection of Land Revenue. This will be noted in detail when I deal with each district.

93. In the Assam Valley there are gaonburas, or village elders, in addition to mouzadars and mandals. There is generally one gaonbura to 150 families. The gaonbura is appointed by the Deputy Commissioner on the nomination of the villagers concerned. A two-thirds majority is necessary. The gaonbura is remunerated by an annual remission of land revenue on eight bighas of rice land. In the Assam Valley, except Goelpara, there are no panchayats or choukidars and no Choukidari tax. The position of the gaonbura is familiar to the Assamese officials and to the Assamese public, but not so to the officials and public in Eastern Bengal. I therefore make no apology for reproducing in extenso the Government rule which defines the status and duties of the gaonbura :—

"The duties of the gaonbura will generally remain as at present. His position is that of the elder and representative of his village, and he is expected to be the mouthpiece of the people amongst whom he lives, and their leader in carrying out works for the common benefit. He sees to the protection of public wells and drinking-water tanks, maintains rights-of-way, and should report threatened breaches of embankments. He will use his influence to secure that the village school-house is properly cared for and the school well attended. He should do his best to promote vaccination. On dehalf of Government, he assists the Tahsildar, or the Mouzadar, in the collection of land revenue, and the mandal in the annual correction of the village map and records and in the maintenance of survey marks. He reports to the Mouzadar or the mandal vital statistics, deaths caused by wild animals, the outbreak of epidemics amongst men and cattle, and serious destruction of crops. He assists in procuring supplies, labour, and transport, on payment, for officers on tour. He will be in charge of a notice board, set up at his house at the cost of Government for the publication of notices such as those in mutation proceedings. In criminal matters, he discharges the duties imposed upon village

headmen by section 45 of the Criminal Procedure Code, and assists the police in the investigation of crime occurring within his charge. He may report crime either in writing or in person or by a messenger as most convenient to him. He will be controlled in the Revenue, not in the Police Department, and will on no account be put into uniform of any kind."

94. In the Surma Valley and Goalpara there are panchayets and choukidars but no gaonburas. The choukidari system of the Surma Valley is analogous to, though not indentical with, the system in Eastern Bengal. Choukidars are remunerated from the proceeds of a choukidari tax.

95. To complete this outline of the village-system in Assam I have only to add that every endeavour is made to confine the post of recorder to genuine residents of the village and that there are three grades of recorder, drawing 8/- 10/- and 12/ per month respectively. The kanungos draw 30/ or 40/ per month. The post of recorder is, as far as possible, hereditary; but it is not, at present, pensionable. On the other hand the post of kanungo is pensionable but not hereditary. Kanungos are selected from the ranks of recorders. Kanungos who do good work receive a "field allowance "of 5/- or 10/ per month in addition to their pay, while recorders who deserve well of Government receive rewards from a special fund which is at the disposal of the Director of Land Records.

CACHAR.

96. The area of this district consists of 3769 square-miles. This, however, includes the North Cachar Hills (1728 square-miles) which are outside the jurisdiction of the Board and the Director of Land Records. The district was annexed to British Territory in 1832, after the assassination of Raja Govinda Chandra. There is no permenently settled land in the district. Apart from the tea lands, the settled area of the district consists of (a) lands settled with cultivating peasants known locally as "Mirasdars", and (b) lands settled with small capitalists as "jangalburi" grants.

97. The current settlement of the ordinary "mirasdari" lands was made by Rai Sarat Chandra Banerji Bahadur. It is a settlement for 15 years and it expires on 31st March 1915. The lands were classified as first class paddy land, second class paddy land and so on; and the villages were also distributed into classes. The revenue assessed on each field therefore depends not only on its own classification but also on the classification of the village within which it lies.

98. There are 1572 "jangalburi" grants in the district. These grants were made under various sets of rules (those of 1864, 1875 and 1882) and expire on various dates. The resettlement of a batch of 58 jangalburi grants was sanctioned by the Chief Commissioner in September 1905 and I have recently forwarded to the Board the proposals of the Deputy Commissioner in respect of the resettlement of 92 more grants. It is hoped that proposals will be submitted during the current year for the resettlement of about 100 jangalburi grants, the terms of which expired in March 1907.

99. In this district there are 99 patwaris, who are supervised by 8 kanungos. There are 3 Sub-Deputy Collectors in charge of Land Records work. Two of the three Sub-Deputy Collectors are in charge of collection work in addition to their other duties and all the three officers reside at the headquarters of the district or sub-division. It will therefore be seen that the Circle system is not in full force in this district. Apart from the three officers just mentioned an additional Sub-Deputy Collector has recently been posted to Cachar in order that the pending resettlements of jangalburi grants may be dealt with expeditiously.

100. During the year under report 16, 763 mutations were recorded in respect of 65, 571 pattas. Of these mutations 1216 were recorded by the formal procedure and 15,547 by the summary procedure of local enquiry which is contemplated by section 53 A of the Land and Revenue Regulation. The Sub-Deputy Collector of Hailakandi is of opinion that in the case of transfers effected by the summary procedure the information which is recorded is not sufficiently definite in regard to the extent of interest which is transferred and

that litigation may arise in the future. I shall look into this question when I go on tour. When I visited this district during the year under report I was still in charge of Agriculture and my time was chiefly occupied in taking measures to meet an outbreak of rinderpest.

SYLHET.

101. The district of Sylhet consists of 5380 square miles. It is considerably larger than any district in Eastern Bengal with the exception of Mymensingh, which measures 6332 square miles. About two-thirds of Sylhet (3767 square miles) is permanently settled. As mentioned in para 39 of this report the revenue history of Sylhet is in many ways analogous to the revenue history of Chittagong. The permanent settlement of Sylhet was made by Mr. Willes and was based upon a rough survey. Previous to the permanent settlement the land revenue of the district had been collected by "Chouduries", but the Choudhuries were passed over at the permanent settlement and the contract was made direct between the State and the persons who had paid revenue to the Choudhuries. Many of these persons were petty cultivators, which accounts for the large number of permanently settled estates (46, 862) now existing in the district of Sylhet. The number is nearly double the number of permantly settled estates in Chittagong (28, 631), and is not far short of the entire number of permanently settled estates in Eastern Bengal (66, 801).

102. In 1802 the Collector of Sylhet, under orders of the Board of Revenue, took steps to confine the permanent settlement to the survey on which it was originally based. Papers were furnished by the patwaris showing lands which they considered as falling outside the permanent settlement. Proclamations or "ilams" were then issued calling for claimants to these lands. If no claimant established his title, the land was held to be at the disposal of Government. This is the origin of the expression "Ilam land" which is applied to the Government estates of Sylhet proper. There are, as a matter of fact, certain Government estates in Sylhet proper which came to Govenment otherwise than through the proclamations of 1802; but it is unnecessary to give details here. On the other hand, certain lands which were true Ilam land were made the subject of a latter-day permanent settlement in 1869.

103. The remarks in last paragraph deal with Sylhet proper. The Government estates of Sylhet proper are, as might be expected from their revenue history, for the most part scattered patches surrounded by private estates. There is however a compact Government estate in the north of the district measuring 484 square miles. This estate is known as "Jantia Parganas". It was annexed to British territory in 1835, having been formerly the property of the Raja of Jantia.

104. By proclamation No. 2343 dated the 12th September 1874 the district of Sylhet, which had hitherto been part of the Dacca Division of Bengal, was transferred to the newly created Chief Commissionership of Assam. As a result the Acts passed by the Bengal Council subsequent to 12th September 1874 are inapplicable to Sylhet. The rent law of Sylhet is still Act VIII (B. C) 1869.

105. The current settlement of the Jantia Parganas is for 15 years which expire in March 1913. The Settlement was made by Babu Chandra Kanta Sen. For Sylhet proper the settlements of all the Government estates, whether true Ilam or otherwise, are being arranged so as to expire in March 1922. The bulk of these estates (297 square miles) was dealt with by Babu Giris Chandra Das in a 20 years settlement expiring in March 1922. Afterwards Babu Srish Kumar Sen dealt with 6 square miles in a 17 years settlement expiring on the same date; while the settlement of the Baniachang tanks which was carried out by the Subdivisional Officer of Habiganj and was sanctioned by the Board during the year under report also expires in March 1922. In the coming field season Babu Srish Kumar Sen will take up the resettlement of the remaining 22 square miles of Government estates in Sylhet proper, as well as the initial settlement of 41 square miles in the Langla Hills which have fallen to Government in the course of civil litigation. The expiry of these settlements

will be arranged so as to coincide with the expiry of other settlements in Sylhet proper. The principles of assessment current in Sylhet are similar to the principles in Cachar.

106. There are 56 patwaris and 10 amins in the district of Sylhet. Of the patwaris 46 are employed in the Jaintia parganas and 10 in a compact estate of Karimganj Sub-Division known as Partabgarh. They perform duties similar to those performed by mandals in the Assam Valley. The 10 amins are employed in the small Government estates which are scattered throughout the district. From the nature of the case the duties of these 10 amins can hardly coincide with the duties of an ordinary village-recorder. In the correspondence ending with the letter of 7th September 1903, the Chief Commissioner therefore sanctioned a modification of their duties. They were excused, among other things, from systematic enquiries in regard to mutation and from the compilation of crop statistics. The Deputy Commissioner has however addressed me recently with a view to bringing the work of the amins more into line with the work of the patwaris. I have invited Mr. Colquhoun's attention to the previous correspondence but I have at the same time permitted him to make an experiment in the current year on the lines which he has suggested. In my next annual report I shall inform the Board of the results of Mr. Colquhoun's experiment.

107. There are seven Supervisor Kanungos in Sylhet. Four of them are employed in the Jaintia Parganas, one in Partabgarh, and two in the scattered Government estates. As regards the Sub-Deputy Collectors, the circle system is not yet in full force. It is true that there are two resident Sub-Deputy Collectors in the Jaintia Parganas, one in charge of Kanairghat Circle and the other of Goainghat Circle. These officers, however, are entrusted with the collection of land revenue in addition to the work of maintaining the record. The Sub-Deputy Collector of Karimganj Sub-Division looks after the work of maintenance in Partabgarh. He is not responsible for the collection of land revenue, but he has many other duties to perform as "second officer" at a Sub-Divisional head-quarters. The 10 amins of the scattered Government lands are supervised as far as possible by the Sub-Deputy Collector who is conducting resettlements in that area. When the entire district of Sylhet, including the permanently settled area, has been Cadastrally surveyed it will be possible to introduce a genuine system of village-recorders supervised by resident Sub-Deputy Collectors in charge of "Circles"; but until this comes about the maintenance of records in Sylhet can never be very satisfactory outside the Jaintia Parganas and Partabgarh.

108. As regards the work of maintenance during the year under review, the Deputy Commissioner reports that 22075 mutations were recorded in respect of 41,274 periodic pattas. The percentage is very high. Most of the mutations (21, 065) were recorded in the villages by the summary procedure.

109. There has hitherto been no real attempt in Sylhet to keep an up-to-date register of the owners of permanently settled estates. A proposal for the preparation of such a register is now under consideration. Such a register, however rough, would be of great use when the cadastral survey of the whole district is undertaken, but the work of preparing the register in advance of the cadastral survey would undoubtedly be very heavy.

GOALPARA.

110. This district consists of 3961 square miles of which 2373 are permanently settled. The permanently settled area formed part of the district of Rangpur until it was separated therefrom by Regulation X of 1822 and placed under a special system of Government along with the Garo Hills. The temporarily settled area consists of the Eastern Duars of Bhutan. This area was ceded to the British Government along with the Western Duars in 1866 (see para 61 under Jalpaiguri). The whole district of Galpara—both the Eastern Duars and the area which is permanently settled—was made over to the new province of Assam in 1874. The Acts of the Bengal Council subsequent to 1874 have therefore no force in Goalpara. The rent law of Goalpara, like the rent law of Sylhet, is Act VIII (B. C.) of 1869.

111. The introduction of the Bengal Tenancy Act into the permanently settled area of Goalpara has been under the consideration of Government during the year under report. No portion of this tract has ever been cadastrally surveyed or has been the subject of a record of rights. I have suggested to the Government that in the first instance a survey and record of rights might be prepared in respect of a selected portion of the tract. The information so gained would, I think, enable Government to form an opinion as to the advisability of extending the Bengal Tenancy Act to the entire tract. It appears to be quite legel under section 17 of Regulation I of 1886 to undertake a survey and record of rights apart from a settlement of land revenue.

112. As regards the Eastern Duars they are divided into five "Duars"—namely Bijni, Sidhi, Goma, Ripu and Chirang. The professional party made a traverse survey, but not a cadastral survey, of the Eastern Duars. The cadastral maps of this tract were prepared by the villiage recorders in the course of Extension Surveys. The total area of the Eastern Duars is 1588 square miles and the cadastral area is now 288 square miles.

113. The Bijni Duar is temporarily settled with the Rani of Bijni from 1901 to 1911. A Supervisor Kanungo and 13 Mandals keep the records up to date. The Supervisor Kanungo and the Mandals are Government servants. The Rani has power to enhance rents, subject to Act VIII B. C. of 1869, during the pendency of the settlement. She also obtains the benefit of the extension of cultivation.

114. The Sidli Duar is at present managed Khas. A temporary settlement was made with the Raja of Sidli at the same time as the Bijni settlement. The Raja died within a few months leaving a minor son. I understand that the son is no longer a minor and the question of making a settlement with him will shortly arise.

115. The other three Duars, namely Ripu, Goma, and Chirang, are purely Khas Duars. They are chiefly interesting in view of two experiments which are in progress in these Duars. One experiments relates to *jotdari* settlement on special terms sanctioned in Chief Commissioner's letter No. 867 R dated the 22nd February 1905. The other experiment relates to a Santal Colony. The two experiments are alleged to clash and it was proposed by Sir Bampfylde Fuller to reduce the area of the Santal Colony from 25 to 15 square miles. By Government letter No. 2183 c dated the 27th February 1907 this proposal has been suspended until March 1909. In the coming field season I hope to tour in the Eastern Duars and to inspect these rival settlements on the grouud.

116. During the year under report 113 mutations were recorded in the Eastern Duars in respect of 1317 periodic pattas. Only one mutation was recorded by the formal procedure in court. The Circle system is not really in force in this district. No Sub-Deputy Collector resides in the Mofussil and only 9 mandals out of 34 reside within their circles. In fact 12 mandals are natives of their districts. When I am touring in the district I hope to make some arrangement, in consultion with the Deputy Commissioner, which will tend towards the establishment of a genuine village agency supervised by one or more resident Sub-Deputy Collectors.

KAMRUP.

117. The area of Kamrup is 3858 square miles, situated on both sides of the Brahmaputra. There is no permanently settled land in the district. The district was cadastrally surveyed by professional agency in 1883-86. The maps were brought up to date in 1902.06 by the Settlement party under Mr. H. C. Barmes. The current settlement is for 20 years, which expires in 1924-25.

118. Before the current settlement the assessment in this district, as in the rest of the Assam Valley, was based on a three-fold classification of fields and a three-fold classification of villages. A fourth class of village was afterwards added. The system might be summarised as follows—

	Homestead (Basti)	Transplanted rice-land (Rupit)	Other land (Faringati)
First class villages	1—6—0	1— 0—0	0—12—0
Second class villages	1—4—0	0—14—0	0—10—0
Third class villages	1—2—0	0—12—0	0— 9—0
Fourth class villages	1—0—0	0—10—0	0— 8—0

The figures in the above table show the revenue which was formerly assessed on each standard bigha. It was found that the system was inequitable. The variations between village and village and the variations between field were too great to be dealt with in either case by a three fold or four fold classification. The system of "Soil-factors" and "Unit rates" was therefore introduced in the new settlement in order to make a fairer distribution of the revenue.

119. Many people think that the system of Soil-factors and Unit rates is something mysterious and esoteric and quite beyond the comprehension of the people concerned. The exact reverse is the case. The system is essentially popular and democratic. As far as possible the people assess their own land revenue. The settlement officer holds meetings of raiyats all over the district and discusses with them the best system of classifying the fields. As a result the old three-fold classification invariably expands. Homesteads, rice lands and other lands are all divided into new classes which commend themselves to the people concerned. When this has been done the people are consulted as to the *relative* capability of each of the new classes to bear land revenue. As a starting point common rice-land is called 16 and the raiyats are invited to award figures to all other kinds of land in order to indicate their relative capability compared with common rice land. By holding these meetings throughout the district the settlement officer is enabled to prepare a table based upon the popular verdict, showing the relative capability of each kind of land to bear land revenue. The figures in this table are the "Soil-factors" of the district.

120. It will be agreed that so far there is nothing mysterious. The next stage is still less mysterious. When the *relative* assessment of each class of land throughout the district has been determined, it only remains to decide the *actual* assessment in each village. For instance, let us suppose that there are two classes of rice-land to which the popular verdict has assigned the relative factors 15 and 10; and that there are two villages, one of which is near a market and in a healthy situation, while the other is far from a market and in an unhealthy situation. It would be fair to assess these two classes of land in the good village at (say) 15 annas and 10 annas per bigha respectively and in the bad village at (say) 12 annas and 8 annas respectively. As between the two classes of land the relative burden is the same in both villages, but the actual burden is adjusted to suit the condition of the people. This adjustment of the actual burden is carried out by assigning to each village a "unit-rate". When the factor of a class of land is 16, a bigha of such land is said to contain 16 "units"; when the factor is 12, a bigha contains 12 "units"—and so on. The assignment of a unit-rate to a village simply means, therefore, that the settlement officer decides by careful local enquiries and by further consultation with the people, how many annas of land revenue he should assess on each "unit" in the village concerned. In the example given above he has assigned exactly one anna to each unit in the good village and four-fifths of an anna to each unit in the bad village. These are the "unit-rates" of the two villages. For facility of calculation it has been usual to state unit rates in decimal fractions. The unit-rates of the two villages in question would be stated as 1·00 and ·80 respectively. It is probably this reduction to decimal fractions which has caused the belief that the system is mysterious. The reduction however, is purely for the purpose of office-calculation and it is not necessary to confuse the people by publishing the decimal fractions. All that is necessary is to publish for criticism the proposed bigha rates of each village, stated in rupees and annas. Such is the procedure which is now adopted. This short digression will, I hope, tend to remove misapprehension and will elucidate the remarks which I make concerning the work in each district of the Assam Valley.

121. The system of classification of land which was adopted in Kamrup is based, so far as arable land is concerned, upon the particular variety of rice which is best suited to the soil in question. In the popular parlance of the district land which is suited to *ahu* or early rice, is called *ahutali*; land which is suited to *bao,* or long stalked rice, is called *baotali*; and so on. The classification of arable

land follows in the main this terminology; but within each class there are subclasses based on the composition of the soil thus we have sandy *ahutali,* loamy *ahutali,* and so on. Homesteads on the other hand are divided into good, bad, and indifferent according to their richness in fruit-trees. Altogether there are now 46 classes of land in Kamrup district in place of the old three classes. It may be that the multiplication of classes has been a little overdone, but it arose from a desire on the part of the settlement officer to meet the wishes of the people. The nett result of the new settlement was a decrease of revenue equivalent to 3·5 per cent.

122. The maintenance staff of the district consists of 298 mandals, apart from 5 mandals who, in accordance with a special arrangement, are paid by the Mauzadar of Beltola. The circle system is in full force throughout the district. There are seven Sub-Deputy Collectors in charge of circles, and they are assisted by 14 Supervisor Kanongos. The circles of Kamrup are—

Gauhati Chhaygaon	South bank
Barpeta Bojali Nalbari Rangia Kamalpur	North bank

123. During the year under report 7539 mutations were recorded in respect of 135,656 periodic pattas. Mutations by the summary procedure numbered 6918, and by the regular procedure 621. Good work was done in this district in regard to the cadastral survey and reassessment of villages which were omitted from the resettlement operations. In the course of his tours Major Herbert gave much personal attention to the work.

124. The assessment of the town lands of Gauhati is now under revision. Rai Radha Kanta Handiqui Bahadur has submitted a valuable note on the subject. The area of the town is about 2 square miles. At present the Government revenue paid by the town lands is only Rs. 6cco/- per annum while on the other hand Government makes a yearly grant of Rs. 10,cco/- to the local Municipality. Government as such is therefore Rs. 4cco/- out of pocket in respect of Gauhati town. Many pieces of land in Gauhati town are now sublet at ten times, some even at a hundred times, the land revenue, while very high prices are often realised by the sale of settlement rights. The case is interesting in view of the movement at home among liberal politicians for the fuller taxation of ground rents in urban areas.

DARRANG.

125. This district consists of 3,398 square miles, none of which is permanently settled. The district was cadastrally surveyed in 1886-87. It is now under resettlement, the Settlement Officer being Mr. J. McSwiney. The old three-fold classification is being repalced by a classification analogous to that which I have explained when dealing with Kamrup. The rate-reports are being sent up by "groups" of villages. During the year under review Mr. Mcswiney submitted the rate report of the Patharughat group. He has proposed a decrease of revenue amounting to 16·45 per cent. Within the next few months I expect to receive the rate-reports of four more groups. The whole work will probably be finished about March 1909.

126. Good progress was made during the year. Mr. McSwiney continues to take up all settlement problems with boldness, thoroughness and ingenuity. He has great powers of observation and is in constant touch with all classes of the population.

127. The maintenance of the record is of course merged in the resettlement proceedings and requires no separate report.

NOWGONG

128. This district consists of 3804 square miles, none of which is permanently settled. The district was cadastrally surveyed in 1887-88 and it is now being resettled by Mr, A. R. Edwards. A system of soil factors based on the same

general principles as that of Kamrup has been adopted as the basis of the new assessment. During the year under report the Settlement Officer submitted the rate report of the South-Western group of villages. The new assessment leaves the total revenue of the group practically unchanged.

129. The rate reports of the remaining groups are expected shortly. Less remains to be done in Nowgong than in Darrang. While the work of Darrang will last up to March 1909 the work of Nowgong will probably be finished by September 1908.

130. Mr. Edwards worked throughout the year in a most painstaking manner. For three months he acted as Deputy Commissioner of Nowgong in addition to his heavy duties as Settlement Officer.

131. As in the case of Darrang the mainttenance of the record was merged, during the year under review, in the resettlement of the district.

SIBSAGAR.

132. The district consists of 4,996 square miles none of which is permanently settled. Like Sylhet, it is larger than any district in Eastern Bengal with the exception of Mymensingh. The district was cadastrally surveyed in 1888-89 to 1891-92. and it was resettled in 1902-06 for 20 years. The Settlement Officer was Mr. Kershaw.

133. In Mr. Kershaw's settlement the old three-fold classification was replaced by a more elaborate classification. The new system of classification of arable land differed, however, in this district from the classification adopted in Kamrup, Darang and Nowgong. In these three districts as already explained, the discrimination between different pieces of arable land was made on the basis of the crop for which the land in question is best suited. In Sibsagar, on the other hand, the primary discrimination was one of level. In this district low lands are known as *da* while high lands are known as *bam*. This broad distinction was adopted in classifying the arable lands of Sibsagar and the subclasses of *da* and *bam* were evolved in consultation with the raiyats. Homesteads were differentiated as in the other districts. Altogether 13 classes of land were recognised in Mr. Kershaw's settlement. The result of the new assessment was a rise in revenue from Rs. 12, 10, 124 to Rs. 12, 86, 808 equivalent to 6·3 per cent.

134. During the year under report enquiries were made in Sibsagar in regard to a few raiyats in whose cases the new assessment was alleged to have resulted in a sudden and excessive enhancement. Along with the Deputy Commissioner I visited some of the villages concerned and investigated a number of individual cases. It soon became evident that the most difficult part of the enquiry lay in ascertaining the exact position of each raiyat before the resettlement, and his exact position after the resettlement. It was not only necessary to piece together the lands which each raiyat held in various cadastral villages, but also to prepare a plus-and-minus account showing relinquishments, sales, and new acquisitions. We found that the statement of proposed remissions which had been drawn up without detailed local enquiries was absolutely worthless. The circle Sub-Deputy Collectors will therefore undertake local enquiries and submit fresh proposals in the coming field season.

135. The incident is instructive in view of the recent orders of the Government of India (No. 130-55-7 dated the 21st January 1907) in favour of progressive enhancements of land revenue,. In parts of India, such as Eastern Bengal, in which the holding of each raiyat is a fairly constant entity it is possible to compare from year to year, or from settlement to settlement, the revenue which is assessed upon a holding. In such circumstances it is possible to devise an automatic scheme for modulating enhancements in the assessment of holdings and for making such enhancements, where necessary, of a progressive character. In the Assam Valley on the other hand, the holding is so fluctuating and so evasive that nothing but confusion will result from an attempt to devise an automatic scheme based on a comparision between the old and the new rent of *aholding*. I am convinced that in the Assam Valley the best way to carry out the object of the Government of India is to look to fields rather than to holdings, and so to regulate the rates of assessment that there will never be a violent change between the old and new revenue of the same *field*. On this subject I have addressed a separate letter to

the Board. In view, however, of the general leniency with which the reassessment of land revenue is being conducted in Assam "sudden and excessive" enhancements are far from common.

136. As regards the maintenance of the record in Sibsagar district, the circle system is in full force. The district has three Sub-Divisions including the Sadar Sub-Division, and each Sub-Division has two circles namely—

SADAR	{ Sibsagar. Nazira.
JORHAT	{ Jorhat. Mariani.
GOLAGHAT	{ Golaghat. Kamargaon.

In each circle there are two Supervisor Kanungos, with the exception of Kamargaon which has only one. The staff of mandals in the district numbers 206.

137. During the year under report 8,177 mutations were recorded in this district in respect of 141,575 periodic pattas, which works out to 6 per cent. Of the total number of mutations, 6855 were effected by the summary procedure and 1322 by the regular procedure.

LAKHIMPUR.

138. This district consists of 4207 square miles, none of which is permanently settled. The available portion of the district was cadastrally surveyed by a professional party in 1891-92. Much of the district however was then uncultivated. The total area of the cadastral villages only came to 269 square miles or 6 per cent of the whole district. Since the professional survey 252 square miles have been surveyed "in extension" by the village recorders. The total area therefore which cadastrally surveyed is now 521 square miles or 12·38 per cent of the district.

139. The current settlement of Lakhimpur was for 10 years. The period expired on 31st March 1903. Since then the settlement has been prolonged from year to year. The resettlement of the district will, I hope, be taken np next cold weather. The current settlement is based on the old three fold classification of *basti*, *rupit* and *faringati*. The new settlement will no doubt be based on a rather more elaborate classification, but it is not to be expected that the number of land classes will equal the number lower down the valley. It is probable that neither Mr. Edwards nor Mr. McSwiny will be available as Settlement Officer of Lakhimpur, but I hope to arrange that they will jointly prepare a scheme of classification and factors for this district towards the close of the coming field season. Their experience in the adjoining districts will be of the greatest value, and a scheme prepared as I suggest by these two officers will undoubtedly form a sound basis for the reassessment of Lakhimpur.

140. Meanwhile the circle system of record maintenance is in force throughout the district. There are three circles in the Sadar Sub-Division, namely Dibrugarh, Tinsukia and Tengakhat; and there is one circle in North Lakhimpur Sub-Division. There are seven Supervisor Kanungos and 113 mandals in the district.

141. A good deal of attention was paid during the year under report to extension surveys undertaken with a view to the district resettlement. This is separately dealt with (para 149). In the ordinary work of maintenance 2432 mutations were recorded, of which 2187 were by the summary procedure. There are 38,053 periodic pattas in the district. In the Sadar Sub-Division mutations were recorded in more than 8 per cent of the pattas. In North Lakhimpur, on the other hand, only 184 mutations were recorded in respect of 12674 periodic pattas. This is equivalent to 1·5 per cent. Of the 184 mutations in North Lakhimpur more than one-third were recorded by the regular procedure in court. It is evident therefore that the practice of summary mutation has not yet taken hold in North Lakhimpur. It may be expected to be systematically introduced after the resettlement of the district.

GARO HILLS.

142. The area of this district consists of 3140 square miles. The whole district is outside the jurisdiction of the Board of Revenue, while the Director of

Land Records is only concerned with a small portion in the plains known as Mouzas V, VI, VII and VIII. A staff of one Supervisor Kanungo and 12 mandals is maintained for this area.

143. Babu Rash Behari Mookerji, Sub-Deputy Collector was deputed to reclassify and reassess Mouza V during last field season. He submitted his report but it was been kept pending until the Government of India announce their decision on the report of the Special Commissioner regarding the boundary of the Garo Territory.

144. One village of Mouza VI remains unsurveyed, but decennial leases have been introduced in the rest of the Mouza with effect from 1st April 1907.

145. As regards Mouzas VII and VIII, Maulvi Mahib-uddin Ahmad submitted reassessment notes in 1906-07. His proposals were formally sanctioned by Government but the new rates will not be brought into force until the Deputy Commissioner has made personal enquiries in the Mouzas.

146. During 1906-07 the Deputy Commissioner was unable to visit the Mouzas in question, as he was engaged for the greater part of the field season in attendance on the Special Commissioner. I regret that I was also unable to visit these Mouzas in the course of my tours.

ASSAM DISTRICTS: GENERAL TOPICS.

147. *The Survey Detachment.* During the year under report there was a survey detachment working in Assam under Babu A. C. Basu, Extra Assistant Superintendent of Survey. The programme for the year consisted in the traverse survey of 200 square miles in Lakhimpur district. After 13 square miles had been completed the detachment was deputed to special work in the Garo Hills. It returned to Shillong in May and took up the survey of Shillong station. The traverse survey of the station has been completed and stones have been embedded to mark the traverse stations. The work of cadastral survey is now in progress.

148. *Inspection of Land Records.*—Rai Radha Kanta Handiqui Bahadur continued to hold the post of Assistant to the Director of Land Records for the purpose of inspecting Land Records in Assam. He was on tour for 303 days in the year and he made many valuable inspections.

149. *Extension Surveys.*—In accordance with the Assam system, the portion of the temporarily settled area of each district which was not cadastrally surveyed by the professional party is being gradually surveyed by the village recorders. During the year under report a good deal of "extension survey" was carried out, particularly in Lakhimpur, Kamrup and Sibsagar. In Lakhimpur the work is preparatory to the district settlement, and in the other two districts it is supplementary to the district resettlements. In Kamrup and Sibsagar rates are fixed by the Deputy Commissioners for the areas surveyed in extension. These rates are fixed on the principles which were adopted during the resettlement proceedings. The amount of extension survey which was carried out during the year will be found in Appendix G. Work in extension surveys is one of the chief means by which village recorders earn rewards.

150. *Resettlement Procedure.*—My personal experience of settlement work had hitherto been confined to Bengal and Eastern Bengal. During the year under report I toured in the Assam districts and studied the procedure in Nowgong and Darrang. I was much impressed with the system of work, particularly with the careful method of field classification and with the enormous advantage which is gained by using a genuine village-agency instead of an extraneous horde of amins, peons and muharrirs. There were lessons, however, to be learnt on both sides. I therefore drew up a short note for the consideration of the Board in which I suggested a few improvements in the Assam procedure. The main points to which I drew attention were *first*, the desirability of introducing a stage in which each raiyat appears in turn before the Assistant Settlement Officer, as happens at "attestation" in Bengal; and *secondly*, the desirability of simplifying the procedure by which rate-reports are prepared and submitted for sanction. I recognised that the first of these reforms might be deferred until proceedings are undertaken in Lakhimpur; but I have suggested to the Board that the procedure in regard to rate-reports might be simplified in the pending settlements.

151. *Roadside lands.*—There was much discussion during the year regarding

the proper method of mapping roadside lands in Assam. The matter was recently dealt with in a small conference attended by the Settlement Officers, the Chief Engineer, and the Commissioner of the Assam Valley Districts. As the conference came to a unanimous opinion I hope that this thorny question will soon be decided.

152. *Form of periodic patta.*—The Assam Association petitioned Government regarding the form of periodic patta which was issued in Kamrup and Sibsagar at the close of the resettlement proceedings. In response to this petition Government decided to enter upon the pattas the classification of each field and the revenue assessed on each field, as well as a clause declaring the right of the settlement holder to apply for the relinquishment of individual fields. It was decided however in view of the existence of cheap printed maps, that no attempt should be made to enter in the pattas the boundaries of the fields. On payment of 4 annas any settlement holder in Kamrup or Sibsagar may now have a patta in the revised form, together with a printed copy of the village map which will show the position of his fields without the aid of written boundaries (correspondence ending with Government letter No. 9400C dated 15 August 1907). In the remaining districts the pattas will of course be issued in the revised form and steps will be taken to issue printed maps at cost price to all who desire to possess a copy.

153. *Pay and prospects of village recorders.*—Petitions are constantly received from village recorders praying for an increase of pay and for a declaration of their right to earn pension. The question of the position and emoluments of the village-recorders in Assam will undoubtedly have to be reconsidered when village-recorders are established in Eastern Bengal. It will be impossible to deal with one body of men apart from the other body. Meanwhile, it is probably best to keep the grade pay of the Assam men on its present basis and to supplement the pay of the best men by more liberal rewards than those which have hitherto been distributed.

154. *Crop forecasts and crop statistics.*—One of the essential duties of the village-recorder is to tabulate each year the crops which are grown within his lot. The Director of Agriculture has brought to my notice that owing to the existing arrangement of the recorders' year the crop statistics are furnished by the recorder too late to form the basis of the forecasts which are issued by the Agricultural Department. The subject is one of great importance. It should be possible to modify the dates of the crop-tours of the recorders and the dates of the publication of the forecasts in such a way that the information collected by the recorders will be available as a basis for the forecasts. I hope to submit joint proposals on this matter in consultation with the Director of Agriculture.

CHAPTER IV. MATTERS PROVINCIAL.

155. In the two previous chapters I have dealt separately with the two portions of the province. The matters contained in the present chapter concern both portions of the province and can therfore be treated most conveniently in amalgamated notes.

TRAINING OF OFFICERS AND STAFF.

156. Three civilians of a year's standing (Messrs Dawson, Street, and Wares) went through a course of survey and settlement training under Mr. Jack in Faridpur. For various reasons the course was not so long as could have been desired, but the three officers acquired a general knowledge of survey and settlement work which will be of use to them hereafter. In Assam one Sub-Deputy Collector, Babu Janaki Nath Das Faisalanavis, went through a course of survey training under Babu A. C. Basu while that officer was working in the Garo Hills. I have recently drawn up for the consideration of the Board a scheme for the training in survey and settlement work of officers in both portions of the province. The scheme is applicable alike to members of the Indian Civil Service, members of the Provincial Civil Service and members of the Subordinate Executive Service. The course of training which I suggest will continue from December to April. It will begin in a district of Eastern Bengal and end in a district of Assam. Three weeks will be left clear between the close of the course and the date of the depart-

mental examination in May. This will enable officers to give finishing touches to their studies for that examination.

157. A batch of Kanungos was trained by Mr. Jack in Faridpur for work in the surveys and settlements of Eastern Bengal. Some Assistant Settlement Officers who were deficient in survey knowledge availed themselves of this opportunity to complete their education. Separate accounts were kept of the expenditure in connection with this training class as it has been ruled to be illegal to apportion this expenditure under section 114 of the Tenancy Act. During the year under report no Kanungos of the Collectorate staffs of Eastern Bengal came to us for survey training in accordance with Board's Circular No. 2976 A dated 11th April 1904. The circular has in fact become more or less obsolete. In Assam the Kanungos are promoted from the ranks of the village-recorders and are, *ex hypothesi*, proficient in survey before they are promoted to be Kanungos.

158. As regards the training of the subordinate staff four institutions should be noticed, namely the Engineering School in Dacca and three Survey Schools in Assam. The Engineering School is under the control of the Education Department. I have been in communication with the Director of Public Instruction regarding the survey curriculum of that school. Mr. Sharp is now formulating the curriculum so as to suit, as far as possible, the requirements of this department both as regards traverse-surveyors and as regards cadastral amins. A small percentage of the traverse-surveyors and cadastral amins now employed by this department is recruited from passed students of the Engineering School. There is no reason why the school should not be one of the chief recruiting grounds of the department.

159. The three Survey Schools in Assam exist primarily for the instruction of village-recorders and the relations of village recorders in the work of survey and record writing. Outside candidates are also admitted on payment of fees. The teachers are remunerated partly by fixed salaries and partly by rewards earned on the result of the examinations. The Assam Survey Schools are situated at Gauhati, Dibrugarh and Silchar. The following table shows the outturn during the year under report :—

Name of schools	Number of successful stucents.				Total.
	Village recorders.	Relations of village recorders.	Prospective village recorders in backward areas.	Out siders.	
Gauhati ...	...	...	1	49	50
Dibrugarh ...	1	2	...	10	13
Silchar ...	9	...	2	22	33
Total ...	10	2	3	31	96

It will be noticed that the bulk of the students are outsiders.

160. I inspected the three Assam schools in the course of my tours. My general impression was that thera was too much desk work and too little field work. If each student surveyed 200 acres in a typical village and wrote up the record on the forms in actual use, he would probably be better equipped for his work than many of the students who now receive certificates.

SURVEY MARKS.

161. The question of the erection and maintenance of survey marks continues to receive attention in both portions of the province. New marks were erected in Assam in the districts of Nowgong, Lakhimpur and the Garo Hills, and in Eastern Bengal by the traverse party working in Jalpaiguri. The topographical party working in Sylhet also erected some traverse stations which will be maintained until the cadastral survey of the district. Where village-recorders are in existence they are the agency for maintaining traverse marks; where there are no village-recorders the marks are, generally speaking, entrusted to the collecting staff of Khas Mahals and Wards Estates, or to panchayets, dafadars and chaukidars. There is no doubt

that the Assam system of planting a *simul* tree five feet to the magnetic north of the mark which is to be maintained is a system which should be adopted wherever *simul* trees will grow.

162. I have been in communication with the officer in charge of Trigonometrical Surveys with a view to more systematic measures throughout the province for the maintenance of trigonometrical stations. In due course I shall address the Board on this subject.

163. Details regarding the work of maintaining survey marks during the year under report will be found in appendices E and H.

UTILIZATION OF MAPS AND RECORDS.

164. In the cadastrally surveyed areas of Assam the record of rights seems to be freely used by executive and judicial officers in the course of their work. In Eastern Bengal the use of the record is slowly but perceptibly extending. It is an instructive fact that the use of a particular record varies directly with the degree of confidence which the preparation of that record inspired in the people concerned. For instance, it has come to my notice from various sources that the record prepared by Mr. J. G. Cumming in Chakla Roshanabad is generally accepted as the ultimate word in all land disputes of that estate. Patience and sympathy in the preparation of a record are more potent in securing its acceptance by the Courts and by the people than any legislative declaration as to its probative force.

165- Village maps printed by the Vandyke process continue to be distributed to each landlord and tenant in Bakarganj who has land in his immediate possession. The cost which is realised under section 114 of the Tenancy Act includes the cost of the printed map. No extra charge is therefore levied in respect of the map. In the Assam settlements thirty copies of each village-map are now being printed. The raiyats in the Assam districts pay no portion of the cost of the proceedings. It is therefore proposed in Assam, as I mentioned in an earlier paragraph, to distribute the printed maps not free but at cost price. It should be remembered, on the other hand, that in those portions of Bakarganj in which land-revenue is being revised no part of the cost is taken from the raiyats, and that the raiyats of those areas consequently receive their printed maps, as well as their khatians, free of all charges. As it is the desire of Government to make the printed maps as popular as possible in all parts of the province, it is open to consideration whether, on the analogy of the Government estates in Bakarganj, each Assam raiyat should not receive a free map, as a matter of course, along with his new patta. Moreover although the Bakarganj khatian contains one boundary for each field, the Assam patta, as previously mentioned, contains no boundaries at all. It follows that the Assam patta, in the absence of a printed map, is not a self-contained document. This also is an important element in the case.

165. As the Vandyke maps are made under the authority of Government they appear to be admissible in evidence under section 36 of the Evidence Act. In order, however, that the presumption of accuracy which is contemplated by section 86 of the Evidence Act should attach to a Vandyke map it is not only necessary that the map should have been prepared under the authority of Government but that the map should " purport " to have been so prepared. All the village maps which are produced by the Vandyke process either in the Bengal Drawing Office or in the Shillong Press now bear the necessary inscription. Some of the Assam maps were until recently defective in this particular and I am indebted to the Judge of the Assam Valley for pointing out of the fact. So far no written judicial decision has been brought to my notice in which a Vandyke map which bears the necessary inscription as to its origin has been rejected as inadmissible in evidence.

JURISDICTION MAPS.

167. In accordance with a Resolution of the Bengal Government, No. 698T-G dated 3rd June 1903, an officer was placed on special duty to prepare thana maps and jurisdiction lists. At the time of the partition he was working on districts which fell within both provinces. By an arrangement between the two Governments he continued to prepare the maps and lists for both provinces. The work was completed during the year under report. The districts of Bakarganj, Faridpur,

Dacca and Jalpaiguri were excluded from the operations in view of the settlement operations which are now pending, or which will shortly be pending, in these districts. For the rest of Eastern Bengal 200 maps on the scale of one inch to the mile, and 200 lists of villages, were printed in respect of each thana. Copies have been distributed to the various departments of Government, and the district officer has in his hands a surplus stock for sale to the public or for distribution to departments which required additional copies. It should be explained that in Chittagong district the thana maps are based on the maps of the cadastral survey (1888 to 1898). In the other districts the maps are for the most part traces from the one-inch Revenue Survey maps (1858 to 1865). In the four excluded districts the maps will of course be based on the new cadastral maps.

168. In the Assam districts there are congregated maps for the cadastral area on the scale of half-an-inch to the mile. The scale of these maps is inconveniently small and the villages bear no serial numbers. There are serial numbers in the thana maps of Eastern Bengal which greatly facilitate a cross reference between the maps and the lists of villages.

169. The question of jurisdiction maps was discussed at a recent Survey Conference in Shillong. It was decided that the thana maps for the cadastral districts in Eastern Bengal should be prepared on an improved system, and that steps should be taken to prepare maps on a similar system for the "circles" in Assam. It is hoped that the maps so prepared both in Eastern Bengal and in Assam will be of material assistance to the professional party which prepares the topographical maps of the areas in question.

ADMINISTRATIVE ARRANGEMENTS FOR PROVINCIAL SURVEYS.

170. The arrangement still continues by which the Superintendent of Provincial Surveys for Bengal performs similar functions in the transferred districts, and by which the Bengal Drawing Office in Calcutta works for both provinces. A scheme has however been prepared for the reorganization of the survey arrangements of this province. The scheme is now being considered by the Government of India. It contemplates a separate Superintendent of Provincial Surveys and a separate drawing office. Meanwhile it is very desirable that this province should have its own arrangements for printing the Vandyke maps of the transferred districts. The Vandyke maps of Assam are already printed in the Shillong Press and arrangements could be made at a moderate cost for undertaking the Vandyke work of the transferred districts.

AMENDMENT OF THE LAND LAW.

171. The amendment of the Bengal Tenancy Act was considered during the year under report and a bill has recently been introduced in the Legislative Council of this province based on Act 1 of 1907 of the Bengal Council. Although the conditions of Eastern Bengal differ so widely from the conditions of Bengal, Behar and Orissa that no amendment of the Bengal Tenancy Act can be a final solution of the land-problem of Eastern Bengal, yet the present opportunity will doubtless be taken for removing some of the more obvious defects of the existing law.

MERITS OF OFFICERS.

172. In the body of this report I have mentioned good work as occasion required and I have forwarded to the Board in a separate communication my nominations for promotion to the rank of Deputy Collector and Sub Deputy Collector. The nominations were made not only from the settlement staffs in both portions of the province, but also from the officers who are working upon the maintenance of the record. In the circumstances it seems unnecessary that I should detail in this paragraph the names of meritorious officers.

CONCLUSION.

173. I have to thank the District Officers in both portions of the province for their ready co-operation in the work of this department and for the courtesy and kindness which I received during my tours.

N. D. BEATSON BELL
Director of Land Records
Eastern Bengal and Assam.

APPENDICES.

APPENDIX

General progress of Surveys and Settlements in Eastern Bengal for the

Name of Districts.	Traverse survey by settlement parties. (square miles)		Cadastral Survey by settlement parties. (square miles)		Khanapuri. (square miles)		Attestation. (Interests)	
	Programme.	Work done.	Programme.	Work done.	Programme.	Work done.	Programme.	Work done.
1	2	3	4	5	6	7	8	9
Dacca	...	...	...	...	...	...	...	...
Mymensingh	...	...	...	...	...	...	12,799	12,799
Faridpur	...	...	842	842	842	842	7,50,000	2,95,960
Bakarganj	...	...	...	...	...	...	5,295	5,295
Noakhali	70	70	70	70	70	70	2,970	2,069
Dinajpur	...	...	...	...	...	...	2,033	1,788
Jalpaiguri	1,018	1,018	69	69	69	69	...	...
Pabna	9	9	11	11	11	11	4,870	2,012
Malda	31	29	31	29	31	29	...	...

APPENDIX

Judicial work by Revenue Officers in Eastern Bengal

Names of Districts.	SUITS UNDER SECTION 105.							
			APPEALS TO SPECIAL JUDGE.					
					RESULT OF APPEALS.			
	Cases for disposal.	Cases disposed of.	Appeals for disposal.	Appeals disposed of.	Decision up held.	Decision modified.	Decision reversed.	Retrial ordered.
1	2	3	4	5	6	7	8	9
Dacca	225	220	85	53	1	52	...	...
Mymensingh	734	321	320	...	...	...	...	...
Bakarganj	6,426	...	...	...	...	...	...	...
Noakhali	402	118	4	1	1	...	...	...
Pabna	388	293	173	...	...	...	...	...

A.

year ending the 30th September 1907.

Draft publication. (interests)		Objections under section 103 A.		Final publication (interests)		Recovery of costs.		Expenditure during the year.	REMARKS.
Programme	Work done.	Cases for disposal.	Cases disposed of.	Programme	Work done.	Amount for realisation.	Amount realised.		
10	11	12	13	14	15	16	17	18	19
...	...	...	...	273	273	647	623	Rs. 850	
11,463	11,463	1,212	975	11,463	1,438	713	...	5,329	
7,50,000	2,40,000	3,206	1,119	...	...	...	...	1,92,277	
5,295	5,295	4,354	4,354	7,43,629	4,12,059	6,19,713	5,08,248	91,450	
2,583	2,583	322	279	7,960	7,960	...	...	12,578	
2,033	1,535	295	295	2,033	515	7877	7877	4,194	
...	...	...	...	...	...	...	...	43,378	
2,783	2,172	544	501	2,356	374	...	...	1,157	
...	...	...	...	173	173				
...	...	...	...	...	...	...	...	2,930	

B.

for the year ending the 30th September 1907.

SUITS UNDER SECTION 106.								REMARKS.
		APPEALS TO SPECIAL JUDGE.						
Cases for disposal.	Cases disposed of.	Appeals for disposal.	Appeals disposed of.	RESULT OF APPEALS.				
				Decision up held.	Decision modified.	Decision reversed.	Retrial ordered.	
10	11	12	13	14	15	16	17	18
3	3	5	5	5	...	...	...	
...	...	...	...	...	...	...	...	
5,156	1,265	78	33	22	3	5	3	
439	248	4	2	2	...	...	...	
48	48	7	...	...	...	...	...	

APPENDIX. C.

Progress in the Settlement of Land Revenue in Eastern Bengal during the year ending 30th September 1907.

Name of District	Determination of tenant's rents.					Determination of revenue payable by proprietors in temporarily settled estates.					Remarks.
	Number of rents for determination.	Number of rents determined.	Percentage of increase or decrease of rent determined in the case of.			Number of Estates for determination.	Number of Estates determined.	Old jama payable to Government.	New Jama.		
			Tenure holders.	Raiyats.	Under raiyats.				Raiyatwari assets.	Payable to Government.	
1	2	3	4	5	6	7	8	9	10	11	12
								Rs.	Rs.	Rs.	
Dacca	200	200	...	+61	...	1	1	73	232	162	
	31	31	...	...	...	...	...	...	...	...	
Mymensingh ...	5,903	2,392	...	+13	...	12	...	...	...	...	
	1,336	1,336	...	+31	...	9	8	511	683	478	
Bakarganj	43,930	14,854	+52	+7	...	117	55	21,603	33,995	20,706	
Pabna	1,073	120	...	...	...	12	5	1,480	3,077	2,059	
Malda	1,064	1,064	...	+18	...	1	...	...	...	...	

APPENDIX D.

Rules for the recovery of Survey and Settlement costs in approved by Government order No. 266 T. Dated the 6th January 1007.

Under section 114 of the Bengal Tenancy Act, VIII of 1885 as amended by Act III (B. C.) of 1898 the Lieutenant Governor of Eastern Bengal and Assam has determined that in the district of Bakarganj the landlords' and tenants' share of the cost of the Survey and Record of Rights shall be apportioned and recovered as specified below :—

I. RAIYATS PAYING CASH RENTS.

These raiyats shall pay at the rate of one anna per rupee on the present rent payable in respect of their holdings. Under raiyats shall be exempted from payment.

II. TENURE HOLDERS PAYING CASH RENTS.

These tenure holders shall pay at the rate of three annas per rupee on the present rent payable in respect of their tenures.

III. OTHER TENANCIES.

The possessors of tenancies which are rent free, or which pay rent in produce, shall pay at the rate of 4 annas for each acre comprised in their tenancies.

IV. MINIMUM CHARGES.

(a) In the case of raiyats paying cash rents there will be a minimum charge of four annas per holding, and broken portions of an anna will always be calculated as a full anna.

(b) In the case of tenure holders paying cash rents there will also be a minimum charge of 4 annas per tenure. In demands up to Rs. 5. broken portions of 4 annas will be calculated as 4 annas. In demands over Rs. 5. broken portions of a rupee will be calculated as a full rupee.

(c) In the case of "other tenancies," a broken portion of an acre will be charged as if it were a full acre.

V. EXEMPTION.

In areas in which a settlement of land revenue is being or is about to be made no charge will be made against either landlords or tenants.

VI. PROPRIETORS.

Such portion of the cost of the Survey and Record of Rights as remains to be assessed after all assessments have been made under Rules I to IV shall be levied from the proprietors of Revenue paying and Revenue free estates in proportion to the profits made by such proprietors.

VII. The above rules are in supersession of the rules sanctioned by the Lieutenant Governor of Bengal on 6th October 1904, but all villages for which the certificate of the final publication of the Record of Rights was signed on or before 31st March 1906 shall be dealt with under the rules of 6th October 1904.

VIII. When an interest is comprised in more than one village the assessment of that interest shall be made in the village in which the revenue or rent payable by that interest has been recorded, or in which the fact has been recorded that the interest is revenue-free or rent free.

APPENDIX E.

Result of Inspection of Survey marks in Eastern Bengal during the year ending 30th September 1907.

Division and District.	Total number of Estates surveyed under the Survey Act or B. T. Act.	Total number of Estates in which permanent boundary marks are erected.	Number of marks erected in the estates mentioned in column 3.	Number of marks inspected during the year under report.	Result of inspection of the marks shown in column 5.			Number of damaged or missing marks restored.	Cost of restoration and how met.	Result of prosecution if any.
					Number in fair order.	Number damaged.	Number missing.			
1	2	3	4	5	6	7	8	9	10	11
			GOVERNMENT ESTATES.							
Chittagong Division.										
Chittagong	...	...	...	485	468	...	17	...	...	
Noakhali	9	9	158	83	81	2	...	2	...	
Rajshahi Division.										
Jalpaiguri	5	5	2,677	365	203	...	162	...	...	
Bogra	2	2	579	579	579	...	...	...	...	
Pabna	2	2	50	...	50	...	...	...	...	
Malda	...	15	132	85	85	...	...	...	...	
			WARDS' ESTATES.							
Rajshahi Division.										
Dinajpur	1	1	649	169	169	...	...	...	...	

APPENDIX F.

Progress of Re-settlement work in Assam during the year ending 30th September 1907.

Name of District.	Number of Villages in which				Expenditure during the year.	Remarks.
	Map and record corrected.	Soil classed.	Attestation completed.	Rate report submitted.		
1	2	3	4	5	6	7
					Rs.	
Darrang	17	588	588	94	50,643	
Nowgong	3	661	661	...	42,804	
	20	1,249	1,249	94	93,447	

APPENDIX G.

Progress of "Extension" surveys in Assam for the year ending 30th September 1907.

Name of District.	Total area of district. (square miles.)	Area surveyed cadastrally by professional party. (square miles.)	Area surveyed in extention by village records. Previously. (square miles.)	Area surveyed in extention by village records. During the year under report. (square miles.)	Area surveyed in extention by village records. Total. (square miles.)	Total area cadastrally surveyed. 3+6	Remarks.
1	2	3	4	5	6	7	8
Cachar	3,769	1,034·24	1·20	7·32	8·53	1,042·76	
Sylhet	5,380	544·61	242·32	2·38	246·70	791·31	
Goalpara...	3,961	...	297·75	3·74	301·49	301·49	
Kamrup	3,858	1570·11	432·00	54·25	486·25	2,056·36	
Darrang	3,398	857·10	198·42	...	198·42	1,055·52	
Nowgong	3,804	1,002·99	124·80	...	124·80	1,127·79	
Sibsagar	4,996	1,520·69	282·75	21·75	304·50	1,825·19	
Lakhimpur	4,207	269·25	131·76	30·22	161·98	431·23	
Garo Hills	3,140	...	...	22·36	...	...	

APPENDIX H.

Condition of Survey marks in Assam during the year ending 30th September 1907.

No.	Classification.	Total number of marks.	Total number found in good order.	Number found not in good order. Repaired.	Number found not in good order. Not repaired.	Total of columns 4 and 5 in good order on 1st October 1907.	Number lost or left unvisited.
1	2	3	4	5	6	7	8
1	Trijunction prisms	13,015	11,088	437	193	11,525	1,297
2	Traverse stations shown by mounds and boughs.	67,801	34,216	17,729	6,999	51,945	8,857
3	Kamungos' mounds, including jungle mounds.	12,416	5,623	3,853	1,151	9,476	1,789
4	Country stones on theodolite stations	21,128	17,756	56	459	17,812	2,857
5	Prisms on boundaries of grants ...	6,603	6,145	100	7	6,245	351
6	Concrete blocks on boundaries of grants	13,450	12,415	171	103	12,586	761
7	Country stones on boundaries of grants	22,002	17,655	122	102	17,777	4,063
8	Mounds on do ...	3,337	2,349	175	486	2,524	327
9	Brick pillars on do ...	835	780	2	7	782	46
10	Iron posts	2	2	...	...	2	...
11	Brick pillars on town boundaries ...	11	11	...	...	11	...
12	Theodolite stations in town shown by concrete blocks	28	28	...	...	28	...
	Total ...	1,60,628	1,08,068	22,645	9,567	1,30,713	20,348

Figures for Darrang are not available.

Where number of marks varies from the number previously reported explanations have been given by local officers.

APPENDIX I.

Maintenance of the Record during the year ending the 30th September 1907 (whole province).

Name of District.	Numbers of tenancies or periodic pattas in area dealt with.	Number of mutations recorded.			Percentage of column 5 on column 2.	Remarks.
		By formal procedure. (Assam)	By summary procedure. (Assam)	Total.		
1	2	3	4	5	6	7
		EASTERN BENGAL.				
Dacca—Government Estates. ...	5,865	...	...	287	5	
Mymensingh Government Estates...	5,416	...	...	140	3	
Faridpur Government Estates ...	6,786	...	...	392	6	
Bakarganj { Government Estates...	7,347	...	...	1,166	16	
Bakarganj { Wards, Estates ...	12,193	...	...	2,114	17	
Chittagong { Government Estates...	89,967	...	...	2,253	3	
Chittagong { Wards, Estates. ...	19,154	...	...	755	4	
Tipperah { Government Estates ...	11,730	...	...	110	1	
Tipperah { Wards, Estates. ...	67,739	...	...	889	1	
Noakhali Government Estates. ...	7,362	...	...	638	8	
Rajshahi. Government Estates. ...	7	...	...	1	13	
Dinajpur Wards' Estates. ...	29,972	...	...	2,678	9	
Jalpaiguri. { Government Estates...	25,981	...	...	2,500	9	
Jalpaiguri. { Wards Estates. ...	4,670	...	...	1	...	
Rangpur-Government Estates. ...	480	...	...	8	2	
Bogra Government Estates. ...	7,358	...	...	540	7	
Pabna-Government Estates. ...	16,353	...	...	53	3	
Malda Government Estates. ...	5,043	...	...	10	2	
		ASSAM.				
Cachar.	65,571	1,216	15,547	16,763	26	
Sylhet.	41,274	1,010	21,065	22,075	53	
Goalpara.	1,317	1	112	113	8	
Kamrup.	1,35,696	621	6,918	7,539	6	
Darrang.	59,738	...	...	...	...	The districts are under re-settlement.
Nowgong.	32,446	...	...	...	...	
Sibsagar.	1,41,575	1,322	6,855	8,177	6	
Lakhimpur.	38,053	245	2,187	2,432	6	

No. 196 $\frac{\text{S \& S}}{\text{G}}$

FROM

J. T. RANKIN, ESQ., I.C.S.,

SECRETARY TO THE BOARD OF REVENUE,

EASTERN BENGAL AND ASSAM,

TO

THE CHIEF SECRETARY TO THE GOVERNMENT OF

EASTERN BENGAL AND ASSAM.

Dated, Dacca, the 21st April 1908.

The Hon'ble Mr. H. Savage, C.S.I., I.C.S.

Member in charge.

SIR,

I am directed to submit, for the information and orders of Government, the reports of the Superintendent of Provincial Surveys, Bengal, and the Director of Land Records, Eastern Bengal and Assam, on the Survey and Settlement operations in this Province during the survey year ending 30th September 1907.

2. The report of the Superintendent, Provincial Surveys, Bengal, reached the Board on the 2nd January 1908 and that of the Director of Land Records on 14th December 1907, and I am to express regret that there has been further delay in printing the reports locally, first, because the proofs which the press supplied in batches of 4 to 6 pages at a time had to be sent out to the Director of Land Records in camp for examination as he wanted to correct the proofs himself and, secondly, because some of the ready plates of the Press were stolen together with a large quantity of type, and the press had, therefore, to do the work afresh.

3. The Board's remarks on the two reports are enclosed.

I have the honour to be,

Sir,

Your most obedient servant,

MUHIB-UDDÍN AHMAD,

For Secretary.

Board's Remarks on the Survey and Settlement Reports for the period ending 30th September, 1907.

During the year the form of the appendices accompanying the Settlement portion of the Report has been changed and the control of minor Settlement operations, which was hitherto under the District Officers and Divisional Commissioners, has, under the orders of Government noted in the margin, been handed over to the Director of Land Records with the view to secure uniformity of practice in all settlements and better supervision.

Government Order No. 10 R., dated 2nd January 1908.
Government Order No. 379 T, dated 11th February 1907.

2. It has now been decided that a separate Superintendent of Surveys is required for this Province separate from that of the Bengal Province; and also a separate Drawing office. The Board have submitted a scheme for the organisation of a Survey Department in this Province.

3. The complaints of the Superintendent, Provincial Surveys, Bengal, contained in paragraph 11 of his report regarding the indifferent attendance on the part of the raiyats of the Baikunthapur estate have been communicated to the Commissioner of Rajshahi with instructions to direct the Manager of the estate to take steps to prevent the recurrence of such complaints in future.

4. The Bhutan and Jalpaiguri boundary is being demarkated under orders of Government in the Judicial Department.

5. During the year a sum of Rs. 1,14,006 was expended by the Superintendent, Provincial Surveys, Bengal, of which Rs. 81,635 was on account of traverse work, Rs. 82 only on account of cadastral work, and the rest for maps. 1018 square miles of traverse survey was done in the Jalpaiguri district at a cost rate of ·72·2 per square mile; and 4 miles of boundary were relaid in the district of Malda.

6. The Survey portion of the report has been submitted by Captain Hirst who is now officiating as Superintendent, Provincial Surveys, Bengal. The report is interesting and very full.

7. The settlement portion of the report submitted by Mr. Beatson-Bell, who has now been relieved of his duties as Director of Agriculture, is like its predecessor exceedingly interesting as it gives a history of the operations in all the districts concerned and the practice in vogue regarding the system of mutation of names and the levy of mutation fees in the Government and Wards' Estates.

8. *Para: 6 of Director of Land Record's Report.*—The task of preparing a survey and record-of-rights for the entire area of both portions of the Province is still far from accomplishment. It will be the work of many years to come.

9. *Para: 12 of Director of Land Record's Report.*—The system of maintenance of records in Government estates in vogue in Dacca is in general followed throughout Eastern Bengal.

The Board are considering the question of the levy of mutation fees and Court-fees on applications for mutation of names in Government estates both town and rural and will come up separately with proposals for a modification in the rules and practice at present in force.

10. *Para: 20 of Director of Land Record's Report.*—The Board consider the result satisfactory.

11. *Paras : 23-25 of Director of Land Record's Report.*— It has since been decided by Government that Khanapuri and attestation of the same area should not be done in the same field season.

12. *Para : 38 of Director of Land Record's Report.*—That the number of riot cases in Bakarganj has decreased by 50 per cent. is very satisfactory as justifying, even earlier than was expected, the institution of the Survey and Settlement proceedings in that district.

13. *Para : 39 of Director of Land Record's Report.*—An advance copy of the repot of Mr. Hughes-Buller on the maintenance of records in Chittagong has just been received by the Member in charge and is under consideration by him.

14. *Para : 43 of Director of Land Record's Report.*—The Board are having enquiries made with regard to the statements made by the Director of Land Records that the Bhukailash Estate in Tippera under the management of the Court of Wards contests the right of the raiyats to transfer their holdings and that in this estate a mutation fee of one rupee is levied in case of transfer by sales, and that in the Sarail estate (also under the Court's management in that district) the management allows transfer of entire, but not of part holdings.

15. *Para : 51 of Director of Land Record's Report.*—The state of things in Rajshahi in respect of mutations is hardly satisfactory.

16. *Para : 57 of Director of Land Record's Report.*—The Collector of Dinajpur has been informed that he is wrong in thinking that mutation of names at the time of payment of rent by the raiyats would entail loss of time and interfere with collection work.

17. The Director of Land Records has now visited the Assam districts and gives a full account of the operations going on in that part of the Province.

18. *Para : 120 of Director of Land Record's Report.*—The system of assessing each class of land gives us the relative power of different holdings to bear our assessment. It does not show whether the assessment, on the whole, is heavy or light. The Board agree that it is not necessary to publish the decimal fractions. The publication of the bigha rates of each village will remove the mystery.

19. *Para : 121 of Director of Land Record's Report.*—The decrease of revenue of 3·5 per cent. is due to effect of the Earthquake and the *Kala-azar*.

20. *Para : 123 of Director of Land Record's Report.*—The Commissioner regards the summary procedure of recording mutations as much too summary, a separate report will be submitted on the subject.

21. *Para : 125 of Director of Land Record's Report.*—It is satisfactory to learn that assessment is being conducted in Assam with general leniency and that sudden and excessive enhancements are far from common.

22. The thanks of the Board are due to Mr. Beatson-Bell for his excellent report and to Captain Hirst for the efficient conduct of the survey work. The Board invite the attention of Government to the merits of officers mentioned in the reports. They have given due consideration to the remarks of the Director of Land Records in making the selections for promotion to Provincial and Subordinate Executive Services.

Resolution on the Survey and Settlement Reports for the year ending 30th September 1907.

Extract from the Proceedings of the Lieutenant-Governor of Eastern Bengal and Assam in the Revenue Department, No. 1469R., dated Shillong, the 12th June, 1908.

READ—

The Survey and Settlement Reports for the year ending on the 30th September 1907, and the remarks recorded on them by the Board of Revenue.

RESOLUTION.

THE Survey and Settlement Reports for the year ending the 30th September, 1907, have not been submitted to Government by the prescribed date, but the delay that has occurred has been due mainly to the difficulty found in getting important reports printed at private presses in Dacca. Arrangements are being made to have such reports printed in future at the new Jail Press in that town.

2. The Settlement Report submitted by Mr. Beatson Bell is full of interest, and summarises admirably the work that has been done, or is now in progress, in each district of the province. The territorial form which has been adopted for the report for the present occasion is admirably adapted to show the existing position throughout the province, but the Lieutenant-Governor is doubtful whether it should be adopted permanently, and whether it will not prove more instructive in future reports to bring together matters of general procedure under separate heads, a brief note being added to show the progress made in each district. Captain Hirst has reviewed in a lucid and adequate manner the progress of the important survey operations supervised by him during the year. The information given as to the expenditure incurred, whether on Survey or Settlement proceedings, is, however, inadequate, and this important point should be treated more fully in future reports. The Lieutenant-Governor is anxious that reforms and changes in procedure should not be introduced without full and careful consideration of their cost. Although economy may easily be pushed so far as to impair the efficiency of the work, it is essential that Government should be in a position to satisfy itself that these operations, the cost of which is directly borne to a large extent by the people themselves, are conducted without extravagance or waste. The Lieutenant-Governor is indebted to the Board of Revenue for their careful review of these reports and will await with interest the results of the further enquiries that have been instituted by them on several inportant points.

3. During the year the Department of Land Records was separated from that of Agriculture, and the two Departments were placed under separate officers. This separation will, it is hoped, greatly facilitate the supervision of all Survey and Settlement work, while it will enable Government to extend the operations of the Agricultural Department, which has an almost limitless sphere of useful work before it. It will also tend to ensure unity of treatment in important details of Land Records work, a desirable result which it has been impossible hitherto to attain, owing to the pressure of the multifarious duties entrusted to the Director. The transfer of the control of petty settlements to the Director, which was effected during the year under review, is expected to secure greater efficiency in their conduct and supervision. The facts reported with reference to the control over these operations in the districts of Malda and Rajshahi, in paragraphs 50 and 84 of the Director's Report, indicate how greatly the reform was needed.

4. The changes in procedure which have been recently sanctioned, by which the whole work of cadastral survey has been handed over to the Settlement Department, assisted by professional advisers deputed by the Survey of India, have necessitated a complete readjustment of the subordinate establishments of both the Survey and Settlement Departments. At the same time, the temporary arrangement under which the Superintendent of Provincial Surveys, Bengal, continued to supervise the operations in progress in the transferred districts, has been found to impose too great a burden upon him, and the reorganisation of the whole of the Revenue Branch of the Survey of India has involved a revision of the scheme previously adopted for the conduct of all such work. Plans are now being matured, for the constitution under a separate Superintendent or Director of a separate survey staff for this province which will carry out all traverse survey operations and assist in the supervision of cadastral work, and will prepare all the maps required in the new Drawing Office to be established in Shillong. And at the same time the subordinate officers of the Settlement Department who have taken the place of the Inspectors and other officials of the Survey Department in the control of the work of cadastral survey and

the preparation of the record-of-rights, will be organised as a separate service of *kanungos* on a semi-permanent basis, with proper gradation to secure adequate promotion and sufficient prospect of advancement to enable Government to obtain suitable men for this important work.

5. Small settlements are in progress in almost all the plains districts of the province, but Survey and Settlement operations on a large scale were confined during the year to the districts of Bakarganj and Faridpur in Eastern Bengal, and Darrang and Nowgong in Assam. A commencement was also made in the survey of the district of Jalpaiguri. The stupendous task of preparing a record-of-rights for the district of Bakarganj is nearly completed, and the resettlement of the districts of Darrang and Nowgong is coming to an end. The resettlement of Lakhimpur will probably be taken in hand during the current year, and with its completion settlement work in the five temporarily-settled plains districts of Assam will terminate for the present. On the other hand, the programme of work which has been undertaken in Eastern Bengal is only at its commencement, and it will take from 15 to 20 years before the three Survey and Settlement parties, which have now been constituted for the purpose, will accomplish their task of completing the record-of-rights for all the transferred districts of Bengal. In paragraph 88 of his report Mr. Beatson Bell suggests a possible modification of the present system under which this programme is being carried out, with a view to placing the work under the direct control of the District Officer. It is very doubtful, however, whether the District Officer could possibly control such proceedings with efficiency, and while the Director's suggestion may perhaps be suitable for all revisional and maintenance work, it scarcely appears to the Lieutenant-Governor, as at present advised, to indicate a feasible reform in the general scheme that has been adopted for the initial preparation of a record-of-rights.

6. In Bakarganj the final record-of-rights for three-fourths of the district had been completed by the close of the year under report, but a good deal of case work remained to be dealt with under sections 105 and 106 of the Bengal Tenancy Act. It is hoped, however, that all this work will terminate in the current year. The distribution of the copies of the record, and the realisation of the costs of the settlement proceedings made considerable progress during the year, and the Lieutenant-Governor notes with pleasure that nearly 99 per cent. of the sum of over five lakhs of rupees which was paid up by the tenure-holders and raiyats on this account was recovered without resort to any coercive process whatever. This appears to justify the decision at which Government arrived that these recovery operations should not be further postponed, and shows that the apprehensions which had been expressed that they would cause hardship to the people were unfounded. As an indication of the benefits that have been conferred upon this district by these operations it is recorded that there has been a decrease of some 50 per cent. in the number of rioting cases since the preparation of the record-of-rights. No result could possibly be more satisfactory than this, and the Lieutenant-Governor shares the conviction expressed by the Collector that "the maintenance of the record will be more instrumental in the pacification and better administration of the district than any other reform."

7. The work of cadastral survey and *khanapuri* (or the filling in of the columns in the forms adopted for the record-of-rights) in the district of Faridpur made substantial progress during the year, under the able supervision of Mr. J. C. Jack, whose energy and capacity in organisation have proved invaluable to Government in this as in previous years. But it was found impossible to carry through the programme laid down for the Settlement staff, which included the attestation as well as the preliminary writing of the record. The experience of the season has shown that climatic conditions render it inexpedient to attempt to complete all field work in such a district as this in one year, and, apart from the strain thrown upon the staff by such a programme, and the danger of the work being unduly hurried and insufficiently supervised, it seems doubtful whether the benefits to be obtained by the rapid completion of the operations compensate for the limitation of the opportunities given to the people to acquire a full understanding of the proceedings, and to place before the officers in an intelligible form all the information which is required for the preparation of an accurate record. In these circumstances, it has been decided to revert to the programme previously sanctioned for these operations, under which the field work of the first season will terminate with the completion of the preliminary writing up of the record and its explanation to the people by subordinate officers on the ground, the attestation of the completed record, village by village, being postponed to the second year.

8. The Director reports that good progress was made in the work of resettling the districts of Darrang and Nowgong. The work in the former district will terminate in March 1909, but it is hoped to complete the operations in Nowgong in September of

the current year. Mr. McSwiney's work in Darrang continues to show an intimate grasp of the conditions of the district and much sympathy with the people with whom he has to deal, while Mr. Edwards' duties in Nowgong have been performed with thoroughness and care.

Paragraphs 119 and 120 of the report contain a full and lucid explanation of the system of "soil factors" and "unit-areas" adopted in the Assam districts by which the assessment of the land revenue is, as far as possible, fixed by the people themselves with reference to the popular estimate of the relative values of the different classes of soils and the relative natural advantages in the way of climate, accessibility, etc., of the different areas assessed. The system when understood is simple and the Director shows that the criticism which it has evoked in some quarters that it is "something mysterious and esoteric and quite beyond the comprehension of the people concerned" is based on a misconception of its true character. There is no reason to doubt either the great value of the system or the admirable results that have been attained under it. In one important point, however, the procedure adopted in these settlements has been found capable of amendment, and that is in the matter of the attestation of the results of the assessment before the proceedings are finally concluded. Hitherto it has been deemed sufficient to explain to the raiyat the rates that are to be adopted for the assessment of each class of land, and the classification of the lands recorded in his name, but arrangements are now being made to communicate to the tenants the actual effect of the assessment upon the total rental of each holding before the final rent-roll is drawn up, and to give them an opportunity, before the proceedings terminate, of lodging any objection they may have to urge to the results of the assessment It is probable that the tenant, while understanding in detail the scheme of assessment which has been explained to him by the Settlement Officer, frequently fails to realise its net result as applied to his own particular holding until the total rental of his lands has been worked out, and it is believed that a modification of the procedure in the direction indicated will diminish the large number of objections which are ordinarily received now after the conclusion of the proceedings for resettlement.

9. The report submitted by the Director of Land Records shows that the systems in force in the different districts of Eastern Bengal for recording mutations of names in Government rent-rolls are widely divergent, and that the results that have been attained are but indifferent. The number of mutations recorded is fair in Bakarganj, and good in Bogra, but very poor in Chittagong and in most other districts. There is still much room for improvement in the record of mutations and the maintenance of rent-rolls in Government and Wards' estates, and His Honour trusts that the Board of Revenue will take steps to secure greater uniformity in the treatment of this subject, pending the introduction of a complete scheme for the maintenance of records-of-rights in all districts which have been cadastrally surveyed.

10. The varied nature of the tenancies in the Rajshahi Division has complicated the labours of Settlement Officers in Jalpaiguri and Rangpur, and other difficulties, due to the imperfections of the present Tenancy Act, have impeded progress and the proper settlement of agrarian troubles in several districts. It is, however, hoped that the experience obtained in the course of current settlement proceedings will eventually enable Government to place the Tenancy Law of this Province on a sound and satisfactory basis. Meanwhile the improvements already introduced by the Bengal Government into the Tenancy Act have been extended to this Province, with suitable modifications to render them applicable to local circumstances.

11. The proposals made by the Director of Land Records in paragraph 135 of his report on the subject of progressive enhancements of land revenue in Assam, have already been separately considered. The rules on this subject which have been framed by Government in consultation with the Board of Revenue will, it is hoped, meet the necessities of the case.

12. The question of the training of junior officers, Imperial and Provincial, in Settlement work, referred to in paragraph 156 of the Settlement Report, is under the consideration of Government, and will be dealt with by a committee in Shillong during the present hot weather.

13. The Lieutenant-Governor has much pleasure in expressing his appreciation of the valuable services rendered by Mr. Beatson Bell during the year. Without the cordial co-operation of the Survey and Settlement Departments the success which has attended the operations would not have been possible. Major Crichton and Captain Hirst have always borne this in mind and have earned the thanks of Government in the post of Superintendent of Provincial Surveys. The admirable work done by the

principal Settlement Officers has been referred to in the course of this Resolution, and the favourable comments made in the report on the work of certain of their Assistants will be duly noted in the Appointment Department of this Government. The work of Mr. A. W. Smart, the Officer in charge of the Jalpaiguri Survey Party, who has for many years past given efficient assistance to Government in Revenue Survey operations fully merits the praise that has been bestowed upon it by Captain Hirst.

ORDER.—Ordered that this Resolution be published in the *Eastern Bengal and Assam Gazette*, and that a copy of it, with copy of each of the two reports, be submitted to the Government of India.

By order of the Lieutenant-Governor,

P. C. LYON,

Chief Secretary to the Government of Eastern Bengal and Assam.

MEMO. No. 1470R.

Shillong, the 12th *June* 1908.

COPY, with a copy of the Survey Report, forwarded to the Deputy Surveyor General in Charge, Revenue Branch, Survey of India, for information.

By order of the Lieutenant-Governor,

C. TINDALL,

Under-Secretary to the Government of Eastern Bengal and Assam.

MEMO. No. 1471R.

Shillong, the 12th *June* 1908.

COPY forwarded to the Secretary to the Board of Revenue, Eastern Bengal and Assam, for the information of the Board.

By order of the Lieutenant-Governor,

C. TINDALL,

Under-Secretary to the Government of Eastern Bengal and Assam.

E. B. & A. S. P. O. (R. & A.) No. 89—330+3—16-8-1908.

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REPORT

ON THE

SURVEY AND SETTLEMENT OPERATIONS

IN

EASTERN BENGAL AND ASSAM

FOR THE

YEAR ENDING THE 30TH SEPTEMBER 1908.

DACCA:
PRINTED AT THE RAMSUNDAR STEAM MACHINE PRESS.
1909.

(English 2 Shillings.) *Price Re. 1-8.*

BENGAL SURVEY

INDEX TO THE TRAVERSE SURVEY IN DISTRICT DACCA.

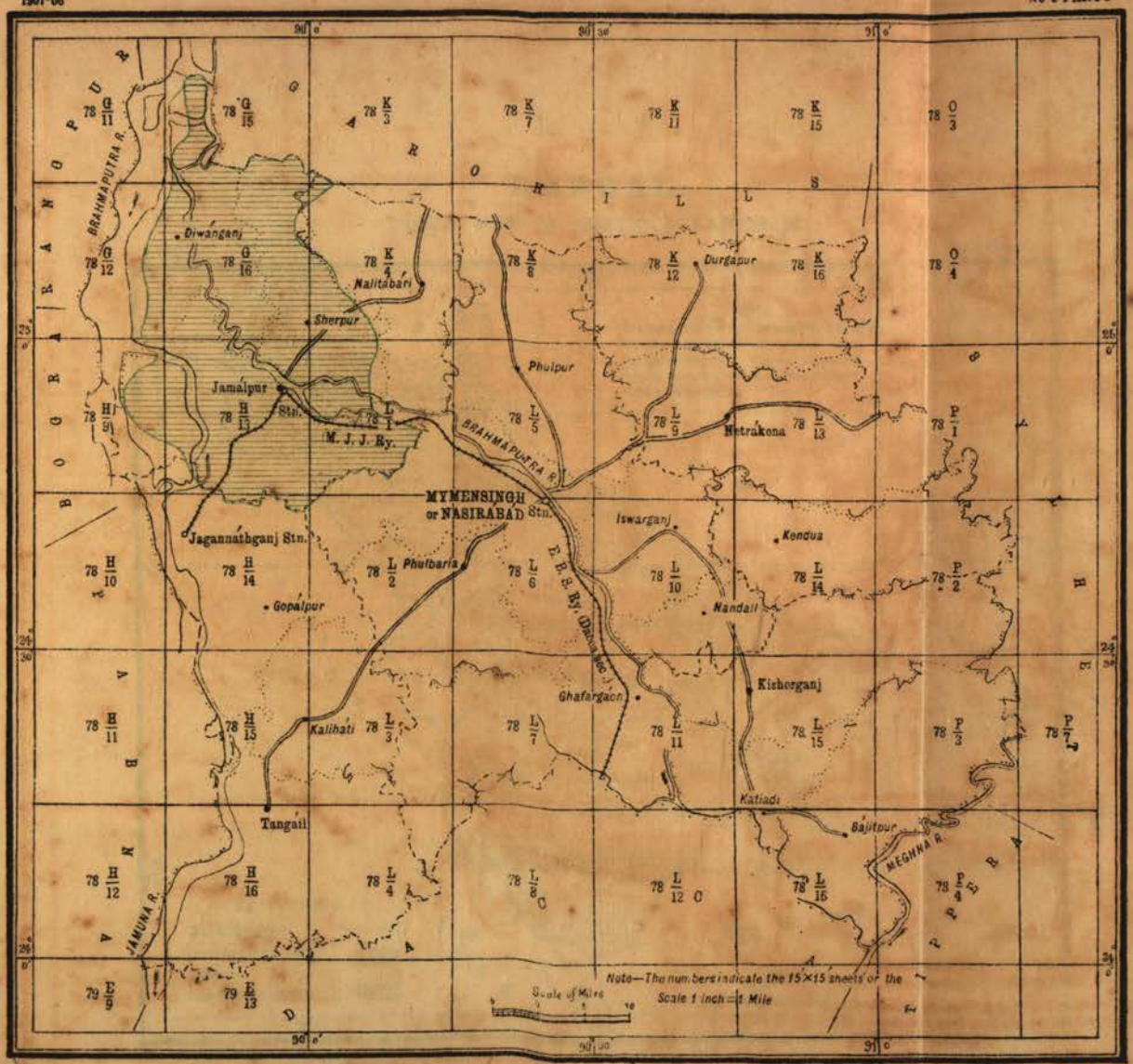
1907-08.

Printed in S. D. O.

EASTERN BENGAL SURVEYS

INDEX TO THE TRAVERSE SURVEYS IN DISTRICT MYMENSINGH

1907-08 — No 6 PARTY



Traversed during 1907-08.

Province Boundary

Division ,,

Printed in S. D. O.

District Boundary

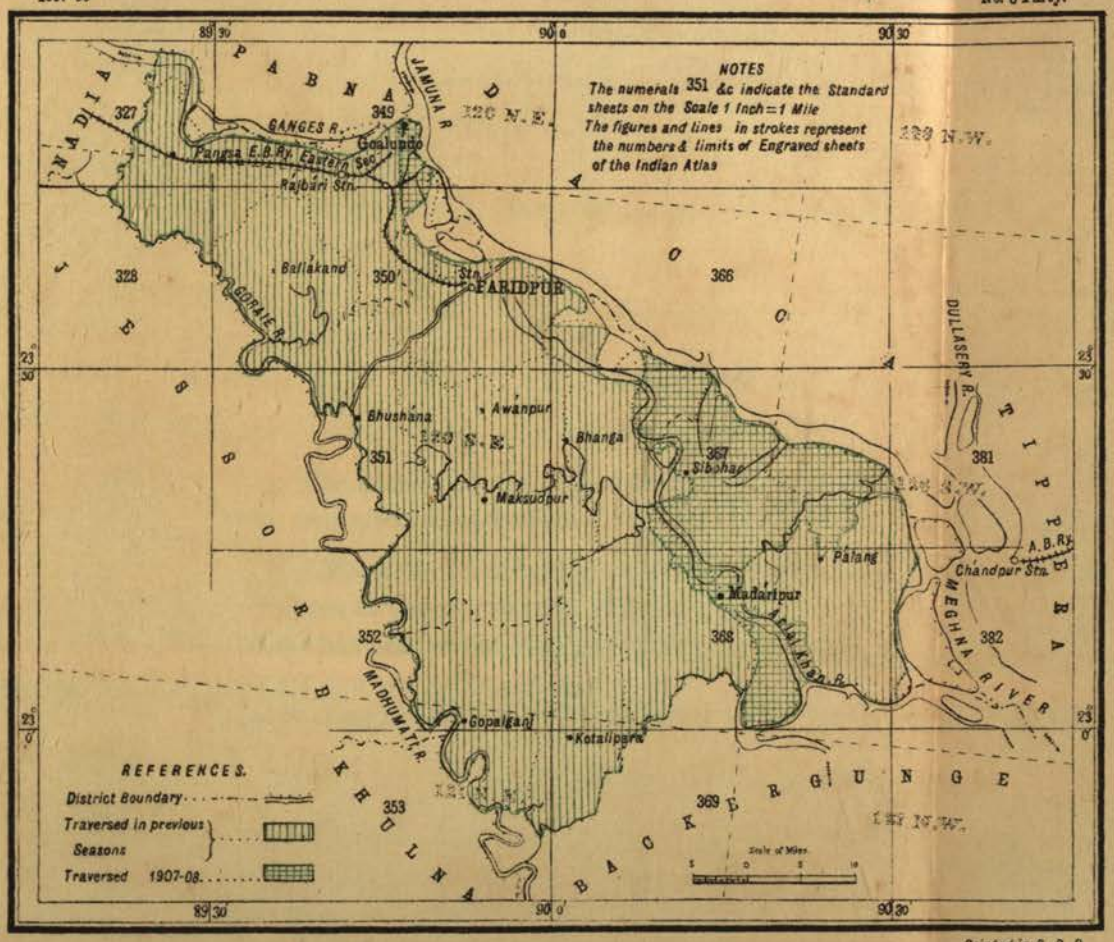
Sub-Division ,,

Thana ,,

BENGAL.

INDEX MAP OF DISTRICT FARIDPUR

1907-08 No. 6 Party.



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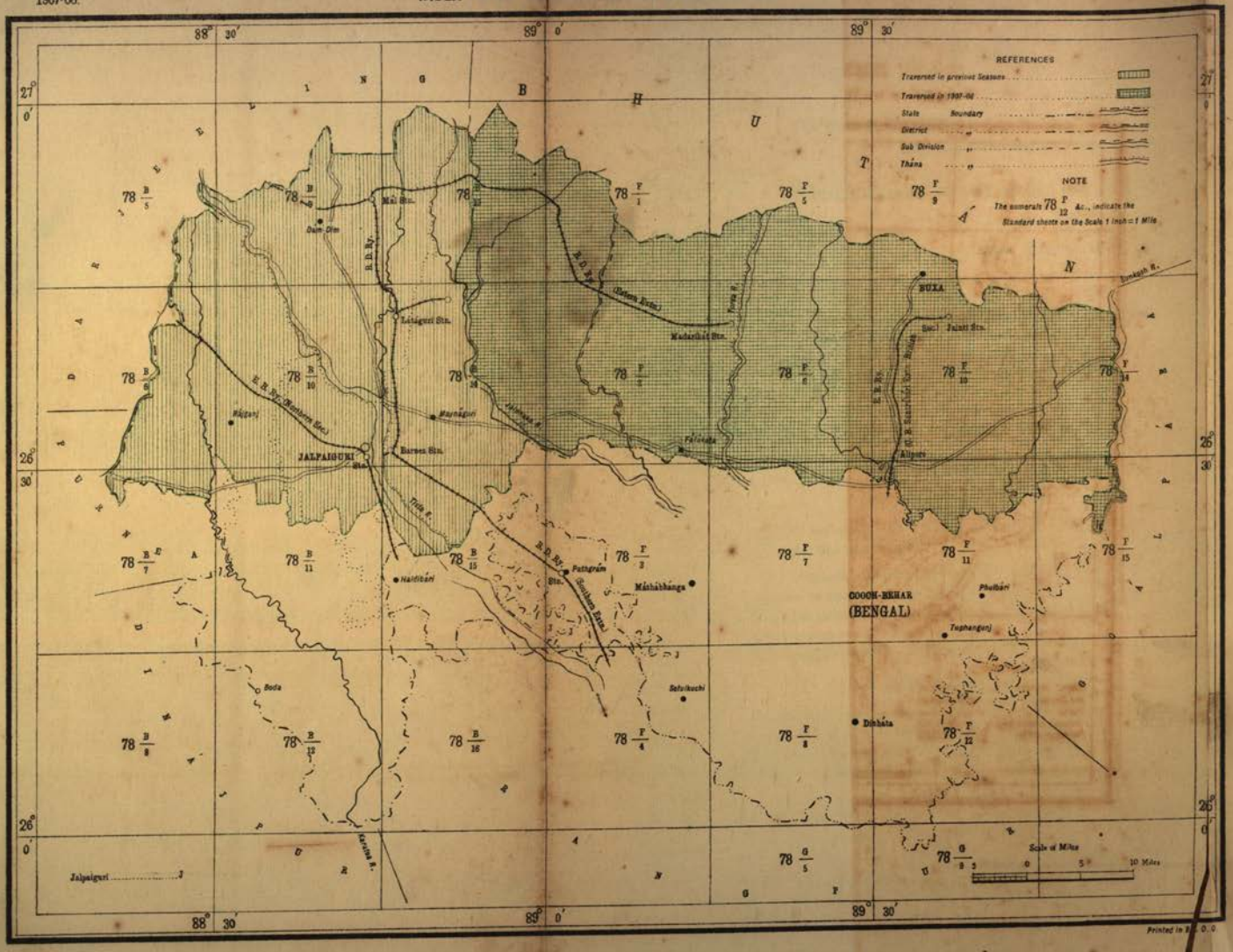
EASTERN BENGAL & ASSAM

1907-08. INDEX TO THE TRAVERSE SURVEY IN DISTRICT JALPAIGURI No. 6 PARTY.



Printed in B. O. O.

No. $\frac{74}{\text{T.R.}—7}$

From

CAPTAIN F. C. HIRST, I. A.,

Offg. Superintendent of Provincial Surveys, Bengal,

To

THE SECRETARY TO THE BOARD OF REVENUE,

Eastern Bengal and Assam.

Dated, Mussoorie, the 12th October 1908.

SIR,

I have the honour to submit my Report on the Survey Operations in Eastern Bengal during the last survey year, namely, from 1st October to 30th September 1908.

2. I have been in charge for the whole period under report.

CHAPTER I.

GENERAL REMARKS.

3. The outturn of the year, excluding linear surveys, such as relaying work, was 2,694 square miles.

The Magnetic variations, given in this report, have been obtained from the Officer in charge of the Magnetic Party of the Survey of India. No attempt has been made to give a closer variation than that to the nearest 15 minutes and the values given only apply to the year 1909; the declination is decreasing by about 3' 30" annually.

CHANGES DURING THE YEAR.

4. During the year attempts have been made to clear off many outstanding advances of pay, etc., which our accounts had, for sometime, shown. The Accountant-General has been kind enough to help us by advice and co-operation, and I am glad to be able to report a practically clear sheet.

These outstandings were really the result of our employing a temporary staff with too small a stiffening of pensionable labour, and, in addition, were due to the possibility of laxness in audit which our system of accounts permitted. I do not think it possible for a similar situation to arise again. I should mention here that Major Crichton inaugurated the campaign against these outstandings, and all that I have done has been to practically complete his plans.

5. Frequent transfers amongst executive officers and the changes caused by the giving up of Cadastral Survey by the Survey of India have necessitated a complete examination of our instrumental and other equipment. Such discrepancies as were found have been adjusted, and our equipment is now fully accounted for. Pending the re-organization of Local Surveys, which, I understand, is just ahead of us, the whole equipment has been overhauled and improved as far as is possible; there is, however, still room for improvement, but we shall start the next field season better equipped in instruments, than we have ever been before.

6. Suggestions have been forwarded to the Board of Revenue for fixing my powers; at present, in some cases, I have less power than an officer in charge of a party of the Survey of India, serving directly under the Surveyor-General; in other cases powers in excess of those which I really need have, have, in the past, been assumed to be permissible.

It is hoped that the suggestions recently put forward will result in such clearly defined powers as will give Accounts officers a proper control of our spending powers, and will also stop that hampering of the Superintendent which at present is unavoidable.

7. The future of Bengal Surveys has, during the year, received much attention. It is proposed that the Provinces of Bengal and Eastern Bengal and Assam shall each have its own Survey Department, but nothing definite has yet come of these proposals. The brief statement above gives no idea of the very considerable amount of work which the proposals have thrown on me; this work has included the practical formation of two new Departments in addition to my ordinary work, since it is proposed that the partition will take place from the beginning of the next survey year. My arrangements are more or less complete, and, on the arrival of Major Crichton a few weeks hence, it should be possible for the two Departments to be working separately within a very short time. The present basis of organization is that nothing should be done that would in any way militate against efficiency should the proposed change not take place, and that such changes as Major Crichton may wish to make should be permissible after his return. It will be understood that the necessity for the two provisions given above has not tended to simplify my work, but it is clear that the provisions were absolutely essential under the circumstances.

8. The head-quarters of my office have been moved from Dinapore to Hazaribagh and a new Traverse Section has been organized for the Mymensingh District (*vide* paragraph 27).

9. It had been hoped that the Bengal Drawing Office would be relieved of work for Eastern Bengal by the end of the survey year; the hope was premature but it seems probable that the end of the Financial Year 1908-09 will see Eastern Bengal and Assam with its own complete Drawing and Reproduction Office at Shillong.

10. Proposals have been put forward for a new system of making Thana maps; greater accuracy is aimed at and the proposals embrace :—

(*a*) The abolition of Standard Mapping in the Local Drawing Office.

(*b*) The abolition of Traverse Charts as now prepared for the Surveyor-General.

(*c*) The preparation of Thana maps on a proper projection and the publication of them in colours. The suggestion to print in colours was made by Sir Lancelot Hare. The scheme allows for similar details as those now shown on Standard maps being shown on Thana maps.

(*d*) The providing for the Surveyor-General of (i) 1" detailed maps by Thanas for supplementary survey purposes.

(ii) In (i) is included the showing of all permanent marks left on the ground and the provision separately of a co-ordinate index to those marks.

The Surveyor-General has accepted the above proposals, and I only await the wishes of the Eastern Bengal and Assam Government to put forward detailed rules for the preparation of the maps and indices in the new style.

11. The cost rates given in the appendix of the report must not be looked upon as final ; the figures used are only approximate, since the Accountant-General has not finally accepted all of them. With the system of accounts which we use discrepancies are unavoidable ; in Bengal, we have, during the year, introduced the Permanent Advance system of accounts experimentally in my office and in one field party ; the success of the experiment is assured and I am about to take steps to obtain sanction for the general introduction of the new system in both Provinces. In the future, therefore, I hope that final figures will be given in Annual Reports.

12. No. 6 Party is in course of being broken up and being turned into two detachments each under an executive officer ; one of these will work in and around Jalpaiguri, and the other in and around Mymensingh.

13. The index maps in the report have been reproduced in the Bengal Drawing Office instead of in the head-quarters office of the Survey of India.

14. Practically all the theodolites in Bengal Surveys have been sent to the Mathematical Instrument Office to be converted to the Railway pattern of stand ; the result should be a more rapid outturn in the future.

Miscellaneous.

15. Attention is drawn to the remarks made in paragraph 19 of this report regarding the comparison of direct distances obtained by traverse with those obtained by triangulation.

16. I beg to take this opportunity of thanking Mr. Beatson-Bell, C. I. E., I. C. S., for the very great help he has so willingly given during a year of—at times—considerable difficulty.

CHAPTER II.

Part I.

Reports on Surveys in temporarily-settled and Government Estates under settlement of rents and Land Revenue.

Nil.

PART II.

Reports on Surveys in Private Estates.

JALPAIGURI DISTRICT.

Traverse Survey.

17. The survey of this district was continued from last year. The programme for traverse was 1,032 square miles, but, as the relaying of Bhutan Boundary along the whole of the north of the district was in progress, it was found to be more economical to include the Bhalka Duars in the programme; the result was an outturn of 1,359 square miles. Of this area the Settlement Officer, Jalpaiguri, will cadastrally survey about 650 square miles next year and the balance will be treated as "advance" traverse. The whole of the north of the district has now been traversed.

The area falls in Parganas Bhatibari, Buxa, East Madari, Chakwa Kheti, Bhalka, West Madari, Lakhipur and Maraghat ; these lands lie in a belt between Bhutan and Cooch Behar, with the Goalpara district as its eastern limit.

18. Of the area traversed 643 square miles represent plots for 16″ Cadastral Survey, 327 square miles tea grants, and 425 square miles Forest Reserves.

19. The origin of Survey was that adopted for the whole district, viz., the intersection of North Latitude 26° 30′ with East Longitude 89°. Three Great Trigonometrical Stations were connected with ; they lie in the Cooch Behar State, and the connections give a traverse error of 8 feet per linear mile; i. e., one foot in two hundred and twenty in *direct* distance. The probable general error is doubtless much smaller than this ; there is only one possible method, of comparing triangulated with traverse distances ; we use that method, but it is apt to give an erroneous idea of the general value of traverse work.

Triangulation takes no notice of superficial irregularities of surface, while the traverser is compelled to take the surface as he finds it ; in other words, the traverser works at a disadvantage, and, assuming good angular work, it is often a better guide to watch the amount of linear corrections required throughout a circuit to make it prove mathematically than to accept the result of the system we now use. It is a peculiar thing, but the more roundabout the course from which a traverse direct distance is arrived at, the better are its results when compared with the triangulated distance ; in our comparison we neglect roundabout results and compare with those obtained from the shortest traverse route available. Another side of the question has a distinct interest ; from the commencement of Revenue Surveys in 1822 until the present day it has seldom been found that direct distances obtained by traverse exceed their equivalents obtained from triangulations ; the traverse length is almost invariably in defect of the triangulated length ; the defect is due to two causes : (a) surface inequalities and (b) expansion of the material of which chains are made, due mainly to the stretching of chains on the ground by measures; (a) tends to reduce, (b) increase errors.

The average of the errors of recent years shows that if, from a 66 foot chain, one-half to three-quarters of an inch be deducted, traverse direct dis-

tances, if deduced from the shortest available routes, would show little or no error when compared with triangulated distances, and at first sight it would appear advisable to work with chains of erroneous lengths. If, however, we take the opposite view of the case, and deduce direct distances from the longest possible route of traverse, if we were to use shortened chains, we should increase our error beyond that which we should obtain from chains of accurate length ; in other words, we should improve our work in one place and vitiate it in another, and it is clear that we ought to adhere to the existing length of chain and existing system of comparison ; at the same time we may reasonably remember that the results of the check are apt to be misleading.

20. 21,098 theodolite stations were observed at ; of these 3,282 are trijunction stones, 1,468 galvanized iron cylinders, 366 stumps of tree trunks, 604 old pillars, 34 iron tripods, 1 post and 15,343 pegs. This array of marks is somewhat miscellaneous ; it is partially caused by several varieties of marks existing along the Bhutan frontier.

21. 255 azimuths were observed and the Magnetic variation is East 1° 30′. The total amount of chaining was 3,596 linear miles.

22. The plots of the area fall on 853 (Cadastral) sixteen inch sheets, and 159 four inch sheets of tea grants and forest lands.

23. As usual demarcation by the inhabitants, previous to the commencement of survey, was conspicuous by its absence. This remark applies generally to all the "transferred" districts of Eastern Bengal. In the preface of my "Notes on Traverse Surveying for Revenue purposes", published by the Bengal Government in 1906, I made the following remark:—" It is perhaps not generally known that help in the right direction given by District Officers will sometimes reduce the cost of traversing a district by about 25 per cent. ; the direction this help should take is that of seeing that the demarcation is properly done by the inhabitants." Since Revenue Surveys began one of the main troubles has been the preliminary demarcation of boundaries; many expedients have been attempted but none quite seem to meet the case. The Assam system of planting trees close to the trijunctions of survey units (villages, taluks, jotes, &c.) is being introduced into Eastern Bengal ; in the future it is possible that the trouble we now experience will be greatly minimized, but I think that a modification of the system we are just starting, by which the trees are planted by us during the Traverse Survey, would tend to simplify our work greatly. If it were possible for inhabitants to be compelled to plant trees close to trijunctions in *advance* of our operations, and I believe that with the help of chowkidars or village officials this could be done, we should have much less bother than we now have in following possession boundaries ; at any rate it seems probable that some signs of interest in the survey at its inception might be induced by some such plan as that suggested above.

The planting of the trees will be of the utmost help in keeping permanent the trijunctions of units, particularly as the stone marks we use are very small. In 1847 three officers* of the Bombay Revenue Surveys submitted a joint note

*Mr. Goldsmid and Captains Wingate and Davidson. Wingate was the father of Bombay Revenue Surveys and occupies a similar position to them as Rennell does to Indian Geography.

on the bringing of the systems of survey then in vogue into conformity and on the best means of ensuring the results of a survey being turned to the best account. Speaking of the permanent marks which they suggested being placed at the corners of all "fields"—a field in Bombay varies between 4 and 20 acres—they say :—"These marks, whatever may be the labour and cost of their construction, we consider essential to the usefulness and permanency of the survey operations." Their advice was acted upon and for over half a century the great advantages of the marks have been recognised by all. It is to be hoped, therefore, that Mr. Beatson-Bell's suggestion for the introduction of suitable trees, near trijunction marks, in Eastern Bengal will eventually have the same result as the remark quoted above and, personally, I think that if the people planted the trees themselves there would be a better chance of their being looked after in the future.

24. The maps of the old surveys of 1858-59, 1865-68 and 1888-92 were used to help in identifying boundaries; even those of the most recent surveys, not twenty years old, were found to give very little help, as possession has changed very greatly. The whole country appears to be being opened up very rapidly.

25. The health of the establishment was bad; the dispensary records show 1,651 patients as being treated at the head-quarters of the camp, and many men were treated in the field itself. Fever and stomach troubles were the main causes of sickness and accounted for 8 deaths; amongst those who died were two excellent theodolite surveyors—one a Bengali.

26. All the plots have been despatched to the Settlement Officer and the recess work has been completed.

Mymensingh District.

Traverse Survey.

27. The orders for the survey of the Jamalpur Sub-division were issued in Government Notification No. 11130 C, dated the 1st October 1907. A special traverse section was organized for this work at very short notice and Mr. A. W. Smart deserves very great credit for being able to start the field work on November 15th, 1907. An establishment of about 600 men was got together in a little over a month, and also, in that short time, the necessary equipment, tentage, furniture, instruments, &c., were arranged for; the result was probably a record of rapid survey organization.

28. The programme carried out was the traverse survey of 876 square miles (originally estimated at 800 square miles, falling in Thanas Dewanganj (243 square miles), Sherpur (249 square miles) and Jamalpur (384 square miles), but excluding the "diara" areas of the first and last named Thanas. The "diara" areas are responsible for an inaccurate estimate.

29. The origin used was the intersection of North Latitude 24° 30′ with East Longitude 90° 30′. Connections were made with 8 Great Trigonometrical Stations, and the traverse error works out at 12·4 feet per linear mile.

30. For the 860 villages surveyed, the theodolite was set up at 17,090 times; the number of stations marked on the ground is 13,902; these embrace-

12 pucca pillars, 1,730 stones, 847 galvanized iron cylinders, 116 baked earthen cylinders and 11,197 pegs.

31. 3,069 linear miles of traversing were measured.

32. 106 Azimuths were observed, and the Mean Magnetic Variation is East 1° 15″.

33. The plots of the area fall on 1,453 sheets on the 16″ scale ; of these, on the 14th February 1908, the plots of 54 villages (51 sheets) were issued to the Settlement Officer for experimental Cadastral Survey.

34. No demarcation was done by the inhabitants, but it should not be inferred from this that we experienced actual obstruction. I had certainly anticipated some trouble in this direction and due allowances were made, in excess establishment, to meet it if experienced. The result of its absence was that the field season closed on April 11th or some 2 weeks earlier than I had anticipated. The Revenue Survey Maps of 1849-57 were used largely in identifying village boundaries.

35. With the exception of the area falling in the rough ground bordering on the Garo Hills, this tract was easy to traverse. The hilly portion was very unhealthy ; excess corrections, not sufficient to effect cadastral results, have, with my consent, been applied, in places, to traverse work in that area.

36. The recess office work is on the point of completion, and all plots *khakas* and *mujmilis* have already been despatched to the Settlement Officer.

Faridpur District.

Traverse Survey.

37. The programme embraced the completion of the district excepting such areas as must be traversed and cadastrally surveyed in the same season ; these areas are, of course, in the river beds, beds which are probably the worst of their type in the world.

38. The area traversed was somewhat scattered and covers 355 square miles (340 villages).

39. 12 Azimuths were observed and old work was connected with wherever possible. The Mean Magnetic Variation is East 1°.

40. There are 5,961 new theodolite stations in the area ; these have been marked by 21 pillars, 452 stones, 86 galvanized iron cylinders and 5,402 pegs. The linear chaining is 1,303 miles, and the season work falls on 589 sheets on the 16″ scale.

41. The field season ran on until nearly the end of June, and was only completed then by increased establishments being drafted from other sections and from Bengal.

42. The absence of demarcation and the unfriendly attitude of the inhabitants caused considerable difficulties ; in some cases the villagers refused to allow the establishment to enter their villages, and in many cases the low-lying nature of the country, more or less submerged during high tides, added to our troubles. The traverse stations of 1904-05 were chiefly lost and had to be relaid, and the physical features of the country had undergone such changes in recent years that the old maps (1858-60) were of little or no use as guides to

the run of the old boundaries. Several cases of wilful uprooting of marks were reported to the Collector and in one case a traverser was severely handled by villagers. Much of the work was done by the help of boats and two men were drowned by the foundering of a boat. Fortunately the health of the establishment was good (only two men died of fever), or a failure of programme might have been avoided with extreme difficulty.

43. The recess office work is completed and the plots, *khakas* and *mujmilis* have been sent to the Settlement Officer.

DACCA DISTRICT.

Traverse Survey.

44. The area traversed was 68 square miles of the higher lying diara lands along the left bank of the Padma River falling in Thanas Aricha, Harirampur, Nawabganj, Srinagar and Munshiganj. This strip adjoins the uplands traversed in 1905-06. The object of survey was the contraction to as reasonable limits as possible of the true diara of the Padma, a river of formidable proportions. It had been hoped that about 144 square miles would have been traversed, but it was found that there was no chance of the traverse marks standing through the rains of 1908, except in 68 square miles. This reduction of the area is probably a good thing, for I anticipate that the Settlement Officer will have his hands sufficiently full during the next season and will not be sorry for the relief which a slight diminution in area will give him.

45. Field work was in progress from the last week of November 1907 to the last week of May 1908.

46. The work was connected with the Main Circuits of 1905-06. Six Azimuths were observed and 319 linear miles of chaining run. The Mean Magnetic Variation is E. 1°.

47. There are 1,477 theodolite stations marked as follows :—4 pillars, 153 stone prisms, 240 galvanized iron cylinders and 1,080 pegs.

48. Four connections were made with Faridpur, and the values of co-ordinates of the Faridpur work reduced to the Dacca origin. The corrections on these connections are somewhat heavy (2 links per chain) ; this is due to the shortness of the connecting lines and the river over which they were made. We might have obtained better results if we had resorted to triangulation, but I do not consider that the result would have warranted the expense which would have been incurred. Measuring across wide expanses of sand and water can hardly be expected to give really good results, particularly with fogs in the morning and evening, and in the day time an atmosphere which causes any distant object to "jump" incessantly.

49. Many of the traverse stations of 1905-06 had to be relaid ; the area is low-lying, often submerged at high tide and constant changes in the beds of channel are occurring.

50. No demarcation was done by the inhabitants who appeared alike indifferent to the presence of our men and to their work.

51. The season's outturn falls on 140 sheets (16″) and these, with their *khakas* and *mujmilis*, have been sent to the Settlement Officer. The recess computations, etc., are complete.

PART III.

Reports on Miscellaneous Surveys.

BHUTAN-JALPAIGURI BOUNDARY REDEMARCATION.

52. This work was undertaken conjointly with the Traverse Survey of the Jalpaiguri District. I do not propose to give a detailed report of what was done here as it has been decided that a full report will be written on the whole boundary when the operations are completed.

It may be well, however, to make a few remarks on the general question of boundaries since there are many—in Eastern Bengal and Assam—which must be relaid or fixed in the next few years. That there should be confusion of boundaries, particularly in the newer part of the Province (Assam) which administratively is very youthful indeed, is only to be expected; there appears to be so much boundary demarcation to be done, often in tracts very thinly populated and in which vegetation grows so fast as to obliterate all traces of cut lines in a very short time, and the question of dealing with this demarcation on lines which will ensure permanency of results at a reasonable expenditure, now or in the near future, seems to be of such importance as to warrant the inclusion, in an Annual Report, of some of the lessons which the Bhutan-Jalpaiguri boundary survey and the relaying of a large number of other lost boundaries (some unfortunately to be lost again in the course of a very few years), have taught.

It is a recognised principle that for all frontier demarcation, wherever it is possible to follow a natural feature, that feature should be recognised as the boundary ; this principle applies theoretically to any form of boundary, but not always practically ; in Eastern Bengal and Assam, and for that matter in a great part of India, the practical application of the principle is often impossible because in the earlier days of our administration we had to be content with too moderate an expenditure, and, until boundary troubles arose, they could not be taken notice of. When trouble did arise, owing to the difficulty of obtaining competent surveyors, an unscientific demarcation occurred and it was considered that the putting down of pillars and posts would, once and for all, do away with possible trouble in the future. No greater mistake could have been made and the present generation, as a result, very often finds that the rule of natural features as recognised boundaries, inside a Province, wherever there is debatable land, is conspicuous by its absence, and that special means must be adopted to prevent future troubles.

Some means must be devised therefore for (*a*) fixing existing boundaries on the ground, (*b*) keeping these boundaries marked in such a way as will prevent further doubt about them and (*c*)—a precaution, but one of the utmost importance—arranging that if a dispute recrudesces, there will be no difficulty in *relaying* the work referred to in (*a*) and (*b*).

Disputes or doubtful boundaries ordinarily occur under the following circumstances :—

(1) In jungle or barren tracts.

(2) In highly cultivated areas.

(3) In areas which may be called a cross between (1) and (2), and which include river bed areas.

Each of these cases has its own complications and the three main items given might be multiplied almost by infinity ; they may, however, be accepted here as three main types under one or more of which all possible disputes in Eastern Bengal and Assam will fall and each of these main types should be dealt with in a specific manner. We can, I think, assume that Cadastral Surveys will,in the near future, prevent serious trouble arising from items (2) and (3) and we can without difficulty, if traverse work is made the basis of a settlement, make quite certain of further trouble being avoided, in these two cases wherever disputes are settled previous to a Cadastral Survey taking place. All that we need do is to decide on a spherical origin for each District in the Province and refer the values of the Traverse stations used to that origin ; if this is done, and the Traverse used is connected with a reasonable number of Great Trigonometrical Stations and other prominent land-marks, there can never be any difficulty in locating on the ground, such a boundary as is here referred to.

Item (1), then, is the only kind of boundary with which we need deal in detail. The first essential is the reference of Traverse work done on the boundary to a geographical origin (I take it as an essential that Traverse work be done); the next is a proper number of connections with Great Trigonometrical Stations and landmarks, and the last is the permanent marking of the boundary. It is only with the last that we need deal at present.

The boundary will either follow natural features or will not do so ; in either case it can be marked by one or other of the following methods :–

(*a*) By permanent pillars.

(*b*) By cleared lines.

(*c*) By a suitable trench.

(*d*) By a line of trees planted at close intervals along the boundary. If a type of tree not very common in the neighbourhood is used, the line will become a permanent record of the boundary. The trees so planted should be numbered with metal plates spiked on to their trunks.

The above would cover all possible cases except those of rivers. Rivers will either be of permanent or shifting bed, navigable or not navigable. For permanent streams one bank or the other may be accepted as the boundary; for shifting streams, if navigable, the navigable channel should be the boundary however much the stream may move ; for other streams, unless it is possible to move the boundary to one side, out of the reach of probable influence of the river, reference marks, used to permanently mark the main bed as it existed at a given time should be used.

Lastly, in all cases in which special measures have been taken to permanently demarcate a boundary, the Local Superintendent of Surveys should be empowered—and expected—to carry out a reasonable amount of inspection which would enable the Government to see from his reports, that the permanent marking was receiving a proper amount of attention by those required to look after it.

I have only dealt with the margin of a subject on which much might have been written. My excuse for approaching the subject will be found in the quotation from a report of 1847 made in paragraph 23 of this report.

If the remarks made above are approved, I shall be glad to prepare a detailed note on the subject.

Cooch Behar-Jalpaiguri Boundary Identification.

53. To help the Settlement Officer in the settlement of this boundary, which is complicated by the existence of several previous surveys and by constant changes in river beds, a case map has been prepared.

The present year's survey picked up 17 pillars, one old station, relaid 116 stations and, in addition,put down 11 stones and 185 galvanized iron cylinders along the boundary as pointed out to the surveyor.

54. A map showing the details given below has been sent to the Settlement Officer to help him in deciding on the final boundary (which falls in 5 different portions aggregating 39 linear miles) :—

(*a*) The Revenue Survey Boundary of 1868-70 and its Traverse Stations and lines in *black*.

(*b*) The boundary as demarcated in 1896-98 in *red*.

(*c*) Iron pillars erected in 1896-98 within *red* circles.

(*d*) Boundary surveyed in 1866-67 in *yellow*.

(*e*) Traverse Stations and lines of Mr. O'Donel's work of 1905 in *blue*.

(*f*) Traverse Stations and lines of 1907-08 in *green*.

It is hoped that the above combined information will enable the Settlement Officer, in consultation with the Cooch Behar authorities, to fix the boundary. His attention might be called to the remarks I have made on rivers as boundaries in paragraph 52 of this report. Unless something is done to ensure permanency of boundary, these disputes are likely to continue to be source of difficulty both to the Deputy Commissioner of Jalpaiguri and to the Cooch Behar authorities.

Part IV.

Report on the Bengal Drawing Office.

55. As hitherto, the above office carried out work for the transferred districts detailed under the seven sections below :—

(1) General or Supervising Section.

(2) Standard Mapping Section, which includes District mapping on the scale of 4" to 1 mile.

(3) Traverse Chart Section.

(4) Thana and Trijunction Mark Maps Section.

(5) Map Reproduction Section.

(6) Badar (map correction) Section.

(7) Map Record Section.

Standard Mapping Section.

56. In my last report I mentioned that six Standard Maps of Districts Tippera and Noakhali (Sarail and Chakla Roshanabad Estates) were being completed in the old style (15 minutes of Latitude and 30 minutes of Longitude) and that one, No. 78 $\frac{P}{4 \& 8}$ had been sent for publication to the Surveyor-General's Office. During this year the balance (Nos. 79 $\frac{M}{1 \& 5}$, $\frac{M}{2 \& 6}$, $\frac{M}{3 \& 7}$, $\frac{M}{4 \& 8}$ and $\frac{M}{12 \& 16}$) have been submitted for publication. A little delay was caused by attempts to use old material so that the new publications could be "up to margin"; the attempts proved futile, and I think that it will be generally recognised that to add old material to new is in many cases much the same as placing new wine in old bottles.

57. As stated in last year's report, a fresh start was made in the Standard Mapping of the Bakarganj District Sheets Nos. 69 $\frac{F}{13}$, $\frac{F}{14}$, and $\frac{F}{15}$, all in the new style (15′ Latitude and 15′ Longitude) have been begun, but it is not yet decided whether it is advisable to await details of the Faridpur District, so as to allow the new sheets to be completed to margin, or to publish only portions of a sheet as a preliminary edition. Pending the decision of this important question, Sheets Nos. 79 $\frac{J}{2}$, $\frac{J}{3}$ and $\frac{J}{4}$, which fall entirely in District Bakarganj, have been commenced ; the first has been submitted for publication, and the other two will follow soon ; owing to the great amount of detail contained in these sheets they take much longer to produce than the sheets of such an area as Bihar in Bengal.

58. An index map of the Mymensingh District has also been made, and, in addition :—

(a) The colouring, both for the head-quarters Office of the Survey of India and the Bengal Drawing. Office, of the fiscal limits and cultivation, and the final examination and correction of 10 unpublished proofs of 4 standard sheets, and 8 unpublished proofs of the District map of Chittagong ; the complete colouring of 4 published proofs of the Chittagong District map was also carried out.

(b) The Settlement Officer of Faridpur has been supplied with 16″ traces showing the Faridpur-Bakarganj District boundaries.

(c) The Settlement Officer of Jalpaiguri has been provided with a similar trace showing the Purnea-Jalpaiguri boundary.

(d) The Settlement Officer, Bakarganj, has been supplied with the traverse data of 13 villages and complete traverse *mŭjmilis* of Dakhin Shahbazpur, and Thanas Bhola, Daulatkhan, Barhanuddin and Tajamuddin. The traverse plots were completed from the data of Mr. Mc. Hatton's Survey of 1889-90.

Traverse Chart Section.

59. No work has been done for Eastern Bengal, because of the difficulty experienced in obtaining proper draftsmen ; the charts are made for the Surveyor-General and there is no immediate necessity for their production especially as it is probable that the Surveyor-General will, in the future, rely on Thana maps and co-ordinate indices to them, instead of Traverse Charts. In this connection vide paragraph 10 of this report.

Thana and Trijunction Mark Maps Section.

60. The Settlement Department is at present making the maps and the Drawing Office simply reproduces them. Of 28 Thana maps, on 28 sheets, 7,000 copies have been supplied during the year. The future of Thana maps is referred to in paragraph 10 of this report.

Reproduction of Village Maps Section.

61. *Bakarganj District (Season 1903-04).*—This work was completed during the year, 11, 490 copies of maps being printed, and 17, 134 supplied. The total supply of maps of this area thus reaches 1,15,613 copies.

62. *Bakarganj District (Season 1904-05).*—There are, in all, 1,689 cadastral sheets to be reproduced and not 1,688 as mentioned in last year's report. Last year 23,759 copies of 360 sheets were printed and 20,763 copies despatched. This year we have printed 1,17,516 copies (1,282 sheets) and the supplies during the year have been 1,20,512 copies. 7 villages (47 sheets) still remain to be reproduced, but we must await the Settlement Officer's press orders for them. Generally speaking it may be taken that the work of season 1904-05 is now completed.

In addition to the above, 360 copies of 18 sheets, on the 4 inch scale, were supplied at the request of the Settlement Officer.

63. *Bakarganj District (Season 1905-06).*—The maps of 15 villages (119 sheets on paper) and of 1 village (79 sheets on tracing cloth) were reproduced, and 11,976 copies sent to the Settlement Officer. Ten villages (144 sheets) of this season work remain for reproduction, and we await the instructions of the Settlement Officer regarding them.

Since no Cadastral work was done in this District after 1905-06, it will be seen that the reproduction of the maps of the District is to all intents completed.

64. *Chittagong District.*—The Collector wished for 10 copies of each of a certain number of selected villages; the identification of the sheets to be reproduced from the list submitted proved to be very difficult; 396 sheets were to be reproduced and their identification was completed in February 1908. During this year the traces of these sheets have been completed (they being on thick paper could not be reproduced direct), on 421 traces, but in 229 of these "badars" were discovered; these have been returned to the Collector for reconciliation and have not yet been received back. Of the balance (192 traces) ten copies of each have been printed and supplied during the year.

65. *Bogra District (Jaipur Government Estate).*—In my last report I mentioned that a number of settlement traces had been sent to the Manager of the Estate, which consists of 149 villages; these were received back on the 2nd May 1908.

A recomparison of all these has been made against original maps with the result that the originals of 34 villages on 46 sheets (44 paper traces) have had to be further revised, because of subsequent revisions, amounting in the case of one village to over 200, having been made by the manager's

office ; again it was not found possible to correct the original map of one village owing to the settlement trace, which had subsequently been prepared in the manager's office, disagreeing very materially with it. This was sent to the manager for correction in his office, but he was unable to correct the original and suggested that a new map be prepared. The matter being referred to the Director of Land Records, that officer ordered this village to be excluded from the programme. In the process of recomparison discrepancies have been found in 38 sheets of 25 villages which have been referred to the manager for reconciliation, but have not been received back yet. A reference was also made to the Director of Land Records with reference to the disagreement of village and pargana names between originals and settlement traces and between them and thana jurisdiction lists lately received. In his reply No. 1108-426, dated the 31st August 1908, he has directed us to ignore the jurisdiction lists and not to make any alterations in, or additions to, the maps which were prepared in the course of survey and settlement. The villages and pargana names have therefore now been revised in all the originals according to the settlement traces which are the final settlement record. Owing to the several revisions referred to above the 1,040 copies that were mentioned in last year's report as having been printed are now useless, and the case of the reproduction of the maps of this estate stands as follows :—

	Copies supplied.
145 villages with 178 paper traces without discrepancies ...	1780
3 villages with 3 paper traces, with discrepancies, which cannot be printed off until reconciliation of discrepancies ...	Nil.
Total ... 148 villages with 181 paper traces.	

66. In addition to the above the reproduction of the 7,000 maps of 28 Thana maps, on 28 sheets, vide paragraph 60 of this report, was carried out in this section.

67. No sheets of Eastern Bengal were received for reproduction for attestation purposes during the year. Both the Settlement Officers of Faridpur and Jalpaiguri find that direct reproduction is better suited to a dry climate than such a climate as they work in. I think that it would be a very great pity to revert to the old system of attestation traces, but nothing can be done at present ; the question must stand over until Eastern Bengal and Assam has a local Superintendent of its own and I think that it may be hoped that with his help some means may be devised by which climatic difficulties may be overcome.

68. The following miscellaneous work was completed during the year :—

(*a*). *Noakhali District.*—8,505 copies of 115 sheets were supplied at the request of the Collector of the District. 85 of the sheets were traced as the originals did not admit of direct reproduction.

(*b*). *Mymensingh District.*—2,000 copies of 10 circle "*mujmilis*" were produced and supplied to the Settlement Officer.

(*c*). *Chittagong District.*—One copy of one village map was made for the Collector of the District.

69. The total number of copies supplied during the year was 1,71,788.

Badar Section.

70. *Bakarganj District.*—The Badars of 7 villages were received and corrected. Correct Thana names and Revenue Survey numbers have been entered in the headings of the sheets. The adjoining names on 97 sheets of this district were corrected.

71. *Chittagong District.*—Village names have been corrected and thana names entered for 115 villages, in the traverse volumes.

72. *Bogra District.*—The headings, and adjoining names and numbers were corrected according to the Settlement traces on 181 sheets of the Jaipur Estate.

MAP RECORD SECTION.

73. During the year we received 238 sheets of the Bakarganj and Noakhali Districts and the total number of sheets now stored in the Bengal Drawing Office is 14,835.

74. The Thana or Pargana registers of 1,427 sheets have been made up during the year; registers have now been compiled for 14,655 villages.

75. 1,831 paper traces have been lodged, after reproduction, the grand total to date being 5,527.

76. Serial numbers have been pasted on 4,545 sheets during the year; the total number of sheets thus treated, to date, is 14,694.

77. 8,305 sheets with broken edges have been repaired with cloth.

78. In anticipation of the removal of the Eastern Bengal Cadastral sheets to Shillong, I have had a complete separation of the Eastern Bengal from the Bengal sheets made, so that the change may be made with as little upsetting of work as is possible.

CHAPTER III.

PART I.

Tours of the Superintendent of Provincial Surveys.

79. I have been in the field and on tour for about 7½ months of the year under report; I have inspected each section during the field season on at least one occasion and have visited each one in recess. Unfortunately, owing to stress of work caused by the pending reorganization of Bengal Surveys, I have not been able to pay proper attention to cadastral inspection; this has been nevitable under the circumstances but it is none the less regrettable on that account. I deputed Mr. Kennegy to help in the training of cadastral establishments for Jalpaiguri and Mymensingh, and his work, in a measure, makes up for the deficiency in my own.

PART II.

Services of Officers.

80. Mr. A. W. Smart, as the Officer in charge of No. 6 Party, has kept up his previous reputation of being a most intelligent and hard working officer. He organized a new Traverse Section for Mymensingh at the beginning of the year in a remarkably short space of time, and his arrangements were exceedingly well made. I strongly commend Mr. Smart's services to the notice of the Board.

81. Mr. L. F. Berkeley, as the Officer in charge of the Bengal Drawing Office, has again done excellent work in a difficult appointment.

82. Messrs. C. A. O'Donel and O.E.C. Judd have both done good work as Officers in charge of Traverse Sections.

83. The other officers, with one exception, have worked well ; the exception is about to be transferred elsewhere.

I have the honour to be,
Sir,
Your most obedient servant,

F. C. HIRST, Captain, I. A.,

Offg. Superintendent of Provincial Surveys, Bengal.

Ramsundar Steam Machine Press, Dacca

APPENDIX I.—PART A.

Summary of the outturn of work of the Survey Parties in Eastern Bengal and Assam for 1907-1908.

District.	Traversing.				
	Number of villages.	Linear miles of chaining.	Number of stations at which the theodolite was set up.	Number of azimuths.	Number of Sub-traverses.
1	2	3	4	5	6
Jalpaiguri	(*a*) 304	(*b*) 3596	21098	255	1101
Mymensingh	860	3069	13902	106	742
Faridpur	340	1303	5961	12	420
Dacca	128	319	1477	6	62
Miscellaneous					
Jalpaiguri-Bhutan boundary ...	.....	94	975	34	.....
Total ...	1632	8381	43413	413	2325

(*a*) Contains 25 Forest blocks, 154 Tea Grants and 125 taluks.

(*b*) Includes extra work done along the Jalpaiguri Cooch Behar State boundary.

F. C. Hirst, Captain, I. A.,
Offg. Superintendent of Provincial Surveys, Bengal

APPENDIX I.—PART B.

Statement of out-turn and cost rates.

District and Estate.	Description of work.	Estimated area to be dealt with in square miles.	Year of inception of operations.	Area surveyed in square miles.		Cost rate per square mile.		Balance of area remaining to be surveyed.	Estimated cost of completing the area in column 9.	Estimated final cost rate per square mile.	REMARKS. [Explanation of unusually high expenditure.]
				During the year under report.	Total including previous years.	During the year under report.	From beginning to end of the year under report.				
1	2	3	4	5	6	7	8	9	10	11	12
Jalpaiguri	Traverse ...	2962	1906	(a) 1395	2413	47·8	44·1	549	26304	45·2	(a) Includes relaying work along the Jalpaiguri Cooch Behar State boundary. This rate is slightly higher than last year because heavy jungle was encountered. Also sick rates were high.
Mymensingh	Traverse ...	6332	1907	876	876	56·1	56·1	5456	306081	56·1	This is the first programme done in this district and I hope that rates may fall in the future.
Faridpur	Traverse ...	2281	1904	355	2248	59·1	48·5	33	1947	48·7	This rate is high because the programme was scattered and consisted of low-lying ground. A comparison with previous rates would be unfair.
Dacca	Traverse ...	2782	1905	68	1706	81·9	56·3	1076	88232	66·3	The rate is high for the reasons given against Faridpur.
Total ...		14357	...	2694	7243	...	...	...	...	...	

F. C. Hirst, Captain, I. A.,
Offg. Superintendent of Provincial Surveys, Bengal.

APPENDIX II.

Statement of sums expended for the year ending 30th September 1908.

District, &c.	Description of work.	Expenditure incurred during the year under report.				Total expenditure from inception to end of the year under report.			
		Actual direct charge.	Share of Superintendent of Provincial Surveys pay & his office.	4 percent. charge for instruments.	Total.	Actual direct charge.	Share of Superintendent of Provincial Surveys pay & his office.	4 percent. charge for instruments.	Total.
1	2	3	4	5	6	7	8	9	10
Jalpaiguri Government Estate ...	Traverse ...	59,010	5,187	2,568	66,765	95,243	7,179	4,098	1,06,520
Jalpaiguri-Bhutan boundary ...	Traverse ...	7,528	662	...	8,190	7,528	662	...	8,190
Mymensingh	Traverse ...	43,441	3,817	1,890	49,148	43,441	3,817	1,890	49,148
Faridpur ...	Traverse ...	18,545	1,630	807	20,982	99,805	5,070	4,195	1,09,070
Dacca	Traverse ...	4,926	433	214	5,573	87,627	4,820	3,697	96,144
Total ...	Traverse ...	1,33,450	11,729	5,479	1,50,658	3,33,644	21,548	13,880	3,69,072
Bengal Drawing Office ...	Standard maps ...	8,937	785	...	9,722	27,343	1,689	...	29,032
	Badars ...	546	48	(a) 24	618	2,373	146	27	2,546
	Map records section	1,387	122	...	1,509	1,996	154	...	2,150
	Thana maps ...	179	17	...	196	1,154	116	...	1,270
	Reproduction for sale &c. of Bakarganj, Faridpur, Chittagong and Bogra.	15,304	1,345	...	16,649	30,373	2,174	...	32,547
Grand total ...		1,59,803	14,046	5,503	1,79,352	3,96,883	25,827	13,907	4,36,617

(a) 4 % instruments applied under the orders of the Government of India contained in their No 219-69-3 dated 17th February 1908.

F. C. Hirst, Captain, I. A.,
Offg. Superintendent of Provincial Surveys, Bengal.

Department of Land Records,
Eastern Bengal and Assam.

No. 122-122 T.

FROM

N. D. BEATSON BELL, ESQR., C.I.E., I.C.S.,

Director, Department of Land Records,
Eastern Bengal and Assam.

TO

THE SECRETARY TO THE BOARD OF REVENUE,
Eastern Bengal and Assam.

Camp, Calcutta, the 4th December 1908.

SIR,

I have the honour to submit a Report on the working of the Department of Land Records in Eastern Bengal and Assam during the settlement year ending on 30th September 1908. In my Report for the settlement year 1906-07 I took up each district in turn and showed the progress which had been made up to the close of that year both in the preparation of initial maps and records and in the subsequent maintenance of the same. Incidentally, I described the systems under which new records have been and are now prepared in different parts of the province, the complete system under which records are maintained in Assam and the incomplete system under which records are maintained in portions of Eastern Bengal. It is unnecessary that I should go over this ground again. I have however prepared a table which will show for the whole province the progress which has been achieved in the preparation of a record-of-rights. I have reproduced this table as Appendix A of report. Apart altogether from revision and maintenance nearly 20 more year will probably be required for the completion of the initial record throughout the province.

2. The remainder of this report will be divided in three parts. In the first part I shall give a brief out line of the work which has been done during the year under review. In the second part I shall deal with some of the most important reforns which have been engaging the attention of this department. In the third part I shall make a few concluding remarks.

PART I.

THE YEAR'S WORK.

3. In Eastern Bengal three Survey and Settlement parties, manned by special officers and financed from imperial sources, were at work. In six other districts there were operations on a smaller scale under the control of the District Officers. In Appendices B. C. & D will be found details of the year's work in Eastern Bengal.

4. The first settlement party continued to work in Bakarganj and Faridpur. In Bakarganj the record has been finally published for the whole district with the exception of about 60,000 tenancies for which land revenue is being settled. The work of the year was mainly confined to the settlement of land revenue, the recovery of costs and the disposal of cases under sections 105-106 of the Tenancy Act. Every effort is being made to wind up the whole work by September 1909. Good progress was again made in the recovery of costs. Although it was estimated by Government that the money would come in at the rate of 5 lakhs per annum, nearly 6½ lakhs were actually realised during the year under report. Up to 30th September 1908, the recoveries in Bakarganj amounted to nearly 13½ lakhs of Rupees, more than 99 per cent being realised without issue of a certificate.

5. In Faridpur the cadastral survey and khanapuri was completed in respect of the second of the three blocks into which the district is divided The area dealt with was 838 square miles. The field-bujharat of practically the whole of this area was also carried out, as well as the outstanding attestation of the first block. More than 12,000 objections under section 103 A were disposed of and the records of a considerable area passed through the scrutiny office and are now ready for final copying or final printing. The work in this district is therefore well advan ced. The cadastral and khanapuri season which has now begun will be the last cadastral and khanapuri season of this district. From October 1909 the sta ff of these branches will be working in Dacca.

6. The second settlement party has been working in Jalpaiguri. The cadastral survey and khanapuri of the first block, consisting of 932 square miles, was completed The field bujharat of this area was not part of the programme It will be carried out along with attestation in the current year. In the experimental area nearly 3000 khatians were atteste d. Some of these khatians were in the Western Duars and some were in Baikunthapur zamindari. In both areas useful experience was obtained.

7. The third settlement party began work in Mymensingh. The cadastral survey and khanapuri was completed in an experimental area of 24 square miles and the staff was recruited and trained for the main work which has begun in the current year.

8. In the Collectorate settlements there was practically no work in the Dacca Division. All the districts of this division have now been taken up by the special settlement parties. In Chittagong division the work was confined to Noakhali where a good deal of important work is in progress both in

Government estates and in private estates. Owing to the intricacy of the case-work in Sandip and elsewhere a Deputy Collector was appointed as special officer under the District Collector. In the Rajshahi Division Government estates were being dealt with in Maldah and Rajshahi, private estates in Dinajpur and Bogra, and estates of both kinds in Pabna. Fair progress was made all along the line and many improvements were introduced in the method of work. Although the area concerned is insignificant when compared with the blocks of the larger settlements many of the Collectorate settlements present features of special difficulty. In the course of the year I visited all the districts concerned and submitted to the Board detailed notes on the work. In several cases I was able to inspect the work in the fields.

9. Particulars of the year's work in the Assam resettlements will be found in Appendix E. The resettlement of Nowgong district was practically finished by the close of the year. In Darrang the field-work was complete in all the groups of villages and the assessment had been sanctioned in six groups out of ten. For the most part, the assessment of the two districts has been carried out on Sir Bampfylde Fuller's system of soil-factors and unit-rates. In areas of a purely fluctuating nature the old system of assessment, based on the three-fold classification of "basti, rupit and faringati," has however been adopted. The general leniency of the present resettlement may be gathered from the following figures, which show the result of all the assessments made in Darrang and Nowgong up to 30th. September 1908.

District	Group of villages	Assessment per settled bigha		Percentage of gross produce taken as revenue after resettlement.
		Before resettlement	After resettlement.	
		Annas	Annas	
Nowgong	South-western	10·97	10·79	17·3
	North-eastern	11·5	12·7	13·4
	South-eastern	11·59	11·58	13·6
	North-western	11·4	10.7	15·4
	Central Group	12·4	12·6	15·7
	Chapari „	9·30	8·69	10·1
	Kapili „	11·22	11·19	11·4
Darrang	Patharughat	15·21	12·71	19·5
	Khallingduar	12·96	12·54	9·5
	Karaiparaduar	12·09	11·05	10·2
	Kalaigaon	12·68	12·70	12·8
	Hauli Mohanpur	15·14	15·14	17·3
	Panchnoi	12·73	12·51	10·36

The suggestion is still sometimes heard that the system of soil factors and unit-rates is a cunning engine devised for the purpose of rack-renting the tenants of Government. The figures in the above statement are a complete refutation of that suggestion. The critics who make that suggestion generally couple their remarks with a recommendation in favour of a system under which 20 per cent of the gross produce represents the Government demand. It will be seen that in no case has the Government demand reached 20 percent.

while in most cases the demand is far below that figure. The new system is in fact an organized endeavour to distribute more evenly the burden of land revenue. It was felt that under the old system poor rice-land paid proportionately too much while rich rice-land paid proportionately too little. In the process of carrying our a more equitable adjustment of the burden some of the tenants who held the best rice-land, locally known as *salitali* or *bordhantali*, have undoubtedly been called on to pay an appreciable increase of rent, but during the year under report the Government rules on the subject of "progressive enhancement" were formally sanctioned and published in the gazette (Notification No. 1208R dated the 18th May 1908) These rules are specially designed to meet the case of the tenants who hold the best rice-land and whose rents have in consequence been enhanced. The rules have been translated into simple Assamese and concrete examples have been added. The rules will now be circulated widely in the districts under resettlement. I have again made a personal experiment as to whether it is possible to work these rules automatically by making calculations in office, and I have again come to the conclusion that it is impossible. I have however tried another experiment with very satisfactory results. This is the experiment of calling all the villagers together, explaining to them the purport of the rules and then inviting any one to come forward who claims that his total rent has been increased up to the limit at which the rules begin to apply. The meeting which I attended was evidently much appreciated by the villagers and I am convinced that such meetings constitute the best, in fact the only, means of an automatic application of the rules.

10. The year's work in "extension surveys" in Assam will be found in Appendix F. It is satisfactory to see that this branch of work received attention everywhere.

11. Some survey and settlement work was in progress in Sylhet in scattered portions of Ilam land and in the Jhum estate of the Langla Hills. An adverse decision of the Privy Council has stopped the work of the Langla Hills but the Ilam work is still in progress. In Cachar the resettlement of 106 jangalburi estates was sanctioned during the year, leaving a balance of 250 estates. This is exclusive of 255 jangalburi estates in which the period of settlement is still current.

12. The system by which the record is maintained up to date in Assam and the systems in vogue in the various Government and Wards Estates of Eastern Bengal were fully described in my last annual report. These systems have remained practically unchanged. The attempt to introduce the full Assam system into the scattered Ilam lands of Sylhet has been abandoned. Mr. Hughes-Buller has simplified the procedure in the Khas Mahals of Bakarganj and has extended the system of field-to field enquiries. No final orders have yet been issued on the subject of mutation fees in Eastern Bengal. In Appendix G will be found an abstract of the work done in both portions of the province. The figures in column 6 of the appendix are of considerable interest. They show the percentage of mutations to holdings and indicate great variations between district and district. It must be remembered, however, that much depends upon whether the holdings of a district have generally been

standing in the name of one man or of many. For the purpose of inter-district comparison a better test would be the percentage of mutations to individual names. This would however necessitate a good deal of calculation both at the initial stage and at subsequent stages and I am doubtful whether the result would be worth the trouble. Another point to notice is that the legal heirs of a Mahomedan are generally twice as numerous as the legal heirs of a Hindu. This greatly adds both to the volume and to the intricacy of work in Mahomedan tracts such as Eastern Bengal and the Surma Valley compared with Hindu tracts such as the Assam Valley. On the other hand the system of relinquishing individual fields is widely prevalent in the Assam Valley but is unknown in Eastern Bengal and seldom practised in the Surma Valley. On the whole I am inclined to attach but a limited importance to the figures in Appendix G, particularly as I know that there has hitherto been some diversity of practice in the method of tabulating mutations in Assam. It is hoped that the new system of tabulation which was sanctioned in Board's letter No. 832 $\frac{SS}{T}$ dated the 1st July 1908 will secure greater uniformity and accuracy: but after all the efficiency of a land-records agency can only be ascertained by careful local inspection.

13. In Appendix H and Appendix I will be found figures regarding the inspection of survey-marks in both portions of the province. In the course of my cold weather tours I inspected many survey-marks in Assam and generally found them in good condition. I have no doubt that the system of *Simul* trees should be tried in Eastern Bengal and an experiment will be made in the coming field season. I found that the list of survey-marks which has hitherto been kept by the recorders in Assam gives no continuous record of the inspections made by the recorder himself and by superior officers. I have therefore introduced a revised form in the shape of a Note-Book which provides the necessary record for each mark. I have also issued orders for revising the recorders' *mujmilis* of survey-marks so as to bring them into conformity with these Note-Books.

14. The three Survey Schools of Assam continued as before. They are situated at Gauhati, Dibrugarh and Silchar and are borne on the budget of the Education Department. From the figures supplied by the Deputy Commissioners concerned it seems that the great majority of the successful candidates can hope for no employment as village recorders. As far as this department is concerned it is very doubtful whether these schools justify their existence. It would probably be better to entrust the duty of training recorders to the Circle Officers and the local Kanungos.

15. I have nothing new to report regarding the utilization of the record by judicial and executive officers. Before writing next report I propose to consult District Judges regarding the practical working of the new section 147 B and the amended section 148 of the Bengal Tenancy Act.

PART II.

REFORMS.

Eastern Bengal.

16. As far as Eastern Bengal is concerned the chief reform of the year was the passing of the Tenancy Act Amendment Bill as Act I of 1908 E. B. & A. Although the bill as passed follows the general lines of the Bengal Act of the previous year yet the modifications have been many and important. To mention only a few points of difference,—in Eastern Bengal a more workable definition of "village" has been adopted; the rights of purchasers of occupancy rights have been more clearly defined; the issue of separate rent-receipts by a local agent cannot be repudiated by an absentee landlord; the rights of bonafide occupants have been safeguarded against collusive rent-suits; the framing of plaints in the rent-suits of surveyed areas has been greatly simplified; and last but not least, all Revenue Officers have been allowed to exercise a much wider discretion in the matter of accepting agreements between landlords and tenants both at the time of recording existing rents and at the time of determining fair rents for the future. It will be seen at once that the departures from the Bengal Act have been impartially made in the interests of landlords and in the interest of tenants, and although it cannot be contended that the law as now amended is a final solution of the agrarian problems of this province, both the landlords and the tenants of Eastern Bengal are under a notable debt of gratitude to the Dacca Council for the modifications which have been introduced.

17. Following on the amendment of the Act, the preparation of a new edition of the Government Rules and a new edition of the Survey and Settlement Manual has been taken in hand. Progress has been made in both works and it is expected that they will be finished in the course of the current settlement year. Rai P. M. Basu Bahadur is now on special duty in connection with the Survey and Settlement Manual.

18. The deputation of Munsiffs to Survey and Settlement work, which was in abeyance during 1906-07 has resumed during 1908-09. Three Munsiffs were on the staff of the Settlement Officer of Faridpur and three on the staff of the Settlement Officer of Jalpaiguri. In most cases the Munsiffs worked well, showing not only loyalty to superior officers but also good fellowship to executive colleagues. Two of these six Munsiffs have recently returned to judicial duty on the completion of their periods of deputation. Six new Munsiffs have however come in their places, so at present there are altogether eight Munsiffs on the staff at the three settlement parties.

19. In the course of the correspondence regarding the constitution of the Settlement staff in Mymensingh the Government of India in their letter No. 1699-427-4 dated the 31st October 1907 again expressed disapproval of the system of employing "Outsider Assistant Settlement Officers". This grade of officer was therefore discontinued at the close of the year under report and the 15 existing "Outsider Assistant Settlement Officers" were absorbed in the staff of Kanungos. By the local Government's letter No. 2507 R dated the 9th November 1908 special rates of pay were sanctioned to selected Kanungos for the settlement year 1908-09 pending the preparation of a scheme for the constitution of a regular Kanungo service.

20. During the year under report it was finally decided by Government in letter No. 1181 T dated the 14th March 1908 that the field season in Eastern Bengal should close at the end of May and that attestation should not as a rule be taken up in the same season as khanapuri. Work has been reorganized in all settlements on the basis of these orders of Government.

21. The proposals for printing the record-of-rights in Eastern Bengal have reached the sphere of practical politics and a definite printing scheme is now before Government in connection with the record of Faridpur (my letter No. 782-15 T dated the 10th November 1908). It is estimated that 25 copies of the record can be printed for considerably less cost than 4 manuscript copies. I have little doubt that the records of all the large operations in Eastern Bengal will in future be printed.

22. In my last report I alluded to the valuable note which has been prepared by Mr Hughes-Buller on the revision and maintenance of the record in Chittagong. During the year under report I submitted the note to the Board along with a covering letter No. 811-244 T dated the 7th April 1908. The subject was considered at the Commissioner's conference in September 1908 and the orders of Government are now awaited.

23. The problem of the future maintenance of the record in Eastern Bengal continues to receive much attention. By the passing of Section 158 A of the new Tenancy Act a summary procedure for the recovery of rents may be granted to selected landlords in areas for w hich the record-of-rights is maintained. This enactment has made it more than ever incumbent on Government to inaugurate proceedings for the maintenance of the record. A notable move has been made in Mymensingh. The staff of surveyors and recorders for the initial operations has been chiefly recruited from among the villagers concerned. The men employed are designated as patwaris not as amins. Each batch of patwaris was trained by its own Kanungo at a convenient place in the locality. So far the patwaris have worked very well and there is every indication that they will be capable of taking up the work of maintenance in the season which follows the final publication of the initial record. Over 400 local patwaris are now at work in the 800 square miles which make up the first block of Mymensingh. Some patwaris reside in the sub-circle of every Kanungo, the average number residing in each sub-circle being 6 or 7.

Assam.

24. Turning to Assam, an important change in settlement procedure was made by the Government of India in their letter No. 1,726-209-2 dated the 9th November 1907. In future there will be personal attestation, raiyat by raiyat. This will not however take the place of field-check. The field-check will continue and personal attestation will constitute an additional stage. The new procedure has been introduced in Lakhimpur.

25. In my last report I suggested that at the time of re-settlement printed maps might perhaps be distributed free of cost to raiyats in Assam. After consulting the Commissioners the Board have asked me to submit definite proposals on the lines suggested. This has now been done and final orders are awaited (my letter No. 54-31 T. dated the 12th November, 1908.)

26. There has been much discussion on the question whether the boundaries of fields should be entered in the Assam pattas. It has finally been decided by the Board that where boundaries have not been entered in the course of re-settlement proceedings any raiyat who desires to know his boundaries may produce his patta before the circle Sub-Deputy Collector during the recess and may get the boundaries noted (Board's letter No. 14 Res—A dated the 24 th November 1908).

27. It is essential for the smooth working of the Land Records system in the Assam valley that the circle Sub-Deputy Collectors should as far as possible be Assamese by birth. The number of such officers now in service is however insufficient for the requirements. I have therefore been in consultation with Colonel Gurdon, the Divisional Commissioner, and we have submitted proposals for increasing the number of Assamese Sub-Deputy Collectors in order that all the circles of the valley may be manned with officers who are in touch with the people (my letter No. 521-11 dated the 12th October 1908).

28. According to the present rules not only the original selection but also the grade promotion of Supervisor Kanungos in the Assam valley is vested in the Director of Land Records. Promotions are made upon a divisional basis, no particular number of the higher appointments being allotted to each district. In consultation with the Commissioner I have submitted to the Board a scheme by which the higher grade appointments among the Kanungos of the Assam Valley will be distributed rateably among the different districts, and will be filled-up on the nomination of the Deputy Commissioner concerned (my letter No. 521-623 T dated the 19th August 1908).

29. By Government letter No. 855 R dated the 6th April 1908 orders were passed for a more liberal use of the reward fund as a method of ameliorating the condition of recorders in Assam. In the current budget there is a provision of Rs 8000 for ordinary rewards to recorders and Rs 2000 for rewards to recorders in connection with the compilation of vital statistics. It is expected that the entire sum will be expended.

30. During the recess months the Land Records staff of each circle is congregated at the head-quarters of the circle. The recess months coincide with the rainy months but no arrangement has hitherto been made for housing the staff during these months. All grades of officer, from the Sub-Deputy Collector down to the Recorder, experience great hardship. In order to remove this hardship I have submitted to the Board a scheme for providing houses for the Sub-Deputy Collectors and barracks for the Kanungos and Recorders (my letter No. 552-502 T dated the 27 th May 1908).

General.

31. Among the reforms which affect both portions of the province I would first notice the recent orders regarding the departmental examinations of Assistant Settlement Officers. Owing to the arduous nature of their outdoor duties, which leave little or no leisure for study, the officers of this

department have always experienced great difficulty in passing their departmental examinations, particularly the examinations in Law and Treasury Accounts. This fact has now been recognised by Government and important concessions have been made in Government order No. 4284 A dated the 21st October 1908. Some of the concessions are temporary and some are permanent. The concessions are much appreciated and on behalf of the officers of this department, I tender our cordial thanks to Government.

32. The system for training junior officers in survey and settlement work received much attention during the year. A small conference was held in Shillong in the month of June 1908. The Lieutenant Governor personally presided. It was decided that the course of training should last from the first of December to the beginning of March and that junior Civilians, junior Deputy Collectors and junior Sub-Deputy Collectors should be trained. In the case of Civilians it was decided that they should undergo Survey and settlement training after one year's residence in the country. I have drawn up an amended set of rules in accordance with the decision of the conference. A training camp under the new rules has recently assembled at Jamalpur.

33. In Government letter No. 203 R dated the 27th January 1908 a steam launch has been sanctioned for the Director of Land Records. It is now under construction and is expected within a few months.

34. In view of the establishment of the Central Jail Press at Dacca the standardisation of forms has occupied a good deal of my time during the year. Three schedules have been allotted to this department schedule XXIII for Eastern Bengal Settlement forms, schedule XXXVII for Assam Land Records forms and schedule XXXVIII for Surma Valley Land Records forms. I have personally revised all the forms of the three schedules. It is hoped that the forms which have now been standardised will be found suitable by all concerned. No department is so dependent on forms as the Department of Land Records.

PART III.—Conclusion.

35. The question of limiting the expenditure on survey and settlement operations, particularly in Eastern Bengal, has received my constant attention. Some years before the partition certain "standard rates" were laid down by the Bengal Government. These rates were applicable to the whole of Bengal, as then constituted, including Behar. Since the promulgation of these rates the cost of living has enormously increased, and moreover the land system of the transferred districts is much more complicated than the land-system of the remnant of Bengal. In the circumstances it is desirable that a revised table of standard rates, applicable only to the transferred districts, should be issued by the Government of this province. In consultation with the Settlement Officers I shall submit to the Board a special report upon this very important subject.

36. As regards the merits of officers little need be written here. The character of the work done by the Settlement Officers, Messrs. Edwards, Jack, McSwiney and Milligan, is well known to the Board and requires no further comment. On the other hand, I have already submitted to the Board, in accordance with standing orders, the names of a few Sub-Deputy Collectors and ungraded officers who, in my opinion, have earned special promotion. It only remains to notice the Deputy Collectors, covenanted and otherwise. Among the former I invite attention to Mr. Briscoe who did thoroughly good and unselfish work in his arduous position as officiating Settlement Officer of Bakarganj and Faridpur. Among uncovenanted Deputy Collectors I give prominence to Moulvie Muhammad Abdul Momin who bore the burden of the preliminary arrangements for Mymensingh settlement. He was not only loyal and enthusiastic himself but he inspired his brother-officers with his own loyalty and enthusiasm. To have recruited and trained 400 resident village-recorders in the course of a few months and with the help of a raw batch of Kanungos was no small achievement, especially when carried out in the midst of the thousand-and-one distractions which always arise at the inauguration of large settlement operations.

37. I have again to thank the District Officers for their cordial co-operation in the work of this Department and many friends, official and unofficial, for their kindness and hospitality during my tours.

I have the honour to be,
Sir,
Your most obedient servant,
N. D. Beatson Bell,
Director of Land Records,
Eastern Bengal and Assam.

APPENDIX A.

"Permanently Settled" in this table includes "Revenue Free"

Districts.	Classification of district area. (Square miles).			Area for which a cadastral survey and record of rights are complete. (Square miles).			Area for which a cadastral survey and record of rights was being prepared in 1907-1908. (Square miles).			Area outstanding (Square miles).			Remarks.
	Permanently settled.	Not permanently settled.	Total.	Permanently settled.	Not permanently settled.	Total.	Permanently settled.	Not permanently settled.	Total	Permanently settled.	Not permanently settled.	Total.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Dacca	2,656	126	2,782	95	9	104	...	...	...	2,561	117	2,678	
Mymensingh ...	6,107	225	6,332	95	36	131	24	44	68	5,988	145	6,133	
Faridpur	2,390	195	2,585	...	...	...	1,612	73	1,685	778	122	900	
Bakarganj	2.272	1,478	3,750	2,272	958	3,230	...	520	520	...	...	...	
Chittagong	713	1,779	2,492	645	1,358	2003	...	...	...	68	421	489	
Tippera	2,363	136	2,499	735	123	858	...	...	...	1,628	13	1,641	
Noakhali	1,460	184	1,644	333	98	431	16	56	72	1,111	30	1,141	
Rajshahi	2,564	29	2,593	81	9	90	...	...	...	2,483	20	2,503	
Dinajpur	3,946	...	3,946	495	...	495	22	...	22	3,429	...	3,429	
Jalpaiguri	1,000	1,960	2,960	...	...	...	500	462	962	500	1,498	1,998	
Rangpur	3,486	6	3,492	106	...	106	...	...	...	3,380	6	3,386	
Bogra	1,319	40	1,359	8	40	48	5	...	5	1,306	...	1,306	
Pabna	1,497	342	1,839	8	26	34	3	1	4	1,486	315	1,801	
Malda	1,860	39	1,899	86	...	86	...	4	4	1,774	35	1,809	
Total Eastern Bengal Districts	33,633	6,539	40,172	4,959	2,657	7,716	2,182	1,160	3,342	26,492	2,722	29,214	
Cachar	2	3,767	3,769	2	1,044	1,046	...	...	...	...	2,723	2,723	
Sylhet	3,825	1,555	5,380	...	795	795	...	...	...	3,825	760	4,585	
Goalpara	2,528	1,433	3,961	...	303	303	...	...	...	2,528	1,130	3,658	
Kamrup	53	3,805	3,858	53	2,173	2,226	...	...	...	...	1,632	1,632	
Darrang	8	3,390	3,398	8	1,197	1,205	...	...	...	...	2,193	2,193	
Nowgong	4	3,800	3,804	4	1,122	1,126	...	...	...	...	2,678	2,678	
Sibsagar	62	4,934	4,996	62	1,778	1,840	...	...	...	...	3,156	3,156	
Lakhimpur	3	4,204	4,207	3	505	508	...	...	...	...	3,699	3,699	
Garo Hills	...	3,140	3,140	...	30	30	...	...	...	...	3,110	3,110	
Total Assam Districts ...	6,485	30,028	36,513	132	8,947	9,079	...	...	...	6,353	21,081	27,434	

N. B.—From the above table it will be seen that on 30th September 1908 a record of rights was either complete or in actual preparation for 28 per cent of the area of the Eastern Bengal districts and 25 per cent of the area of the Assam districts. In the Assam districts there is much hill and jungle still unfit for cadastral survey.

APPENDIX B.

General progress of Survey and Settlement in Eastern Bengal for the year ending the 30th September, 1908.

	Name of district.	Traverse Survey by settlement parties. (square miles).		Cadastral Survey by settlement parties. (square miles)		Khanapuri. (square miles)		Attestation (interests).		Draft publication (interests).		Objections under section 103 A.		Final publication (Interests).		Recovery of costs.		Expenditure during the year.	Remarks.
		Programme.	Work done.	Programme.	Work done.	Programme.	Work done.	Programme.	Work done.	Programme.	Work done.	Cases for disposal.	Cases disposed of.	Programme.	Work done.	Amount for realisation.	Amount realised.		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Imperial Settlements.	Bakarganj	...	...	...	...	...	...	...	...	...	...	...	...	3,31,570	2,77,801	5,00,000	6,45,281	1,43,966	
	Faridpur	...	...	838	838	838	838	5,30,700	5,22,700	586,660	5,78,660	17,958	12,575	...	...	...	...	4,83,695	
	Jalpaiguri	...	...	932	932	932	932	2,819	2,819	2,457	2,457	29	23	...	...	...	...	2,53,468	
	Mymensingh	...	...	24	24	24	24	...	...	...	...	...	...	...	...	...	...	65,152	
Collectorate Settlements.	Noakhali	9	9	9	9	9	9	4,411	4,411	4,411	4,411	1,012	1,012	4,393	895	...	...	16,243	
	Rajshahi	4	1	4	1	4	1	157	119	...	...	...	...	...	...	...	...	nil	
	Dinajpur	20	20	10	8	...	...	245	...	498	...	...	...	1,225	727	...	...	6,826	
	Bogra	..	...	4	4	4	...	...	...	...	...	...	...	...	...	...	...	704	
	Pabna	4	4	11	11	11	10	2,895	1,909	427	427	172	172	4,318	4,318	...	...	3,555	
	Malda	5	3	5	3	5	1	3,826	2,652	616	...	...	...	616	...	...	...	1,599	

APPENDIX O.

Judicial work by Revenue Officers in Eastern Bengal for the year ending the 30th September 1908.

Name of District.	Suits under Section 105.								Suits under Section 106.							
	Cases for disposal.	Cases disposed of.	Appeals to Special Judge.						Cases for disposal.	Cases disposed of	Appeals to Special Judge.					
			Appeals for disposal.	Appeals disposed of.	Result of appeals.						Appeals for disposal.	Appeals disposed of.	Result of appeals.			
					Decision upheld.	Decision modified	Decision reversed.	Retrial ordered.					Decision upheld.	Decision modified.	Decision reversed.	Retrial ordered.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Bakarganj ...	16,477	1,210	359	341	341	...	...	...	11,742	4,443	30	30	22	7	1	...
Dacca. ...	5	5	32	32	26	5	...	...	...	...	...	...	...	...	...	...
Noakhali ...	1,400	285	195	3	2	1	...	...	379	206	2	2	1	1	...	...
Dinajpur ...	1,097	1,073	...	...	...	...	...	...	119	59	...	...	...	...	...	...
Pabna ...	10	1	33	2	...	...	...	...	56	8	26	8	7	...	1	...

APPENDIX D.

Progress in the Settlement of Land Revenue in Eastern Bengal during the year ending 30th September, 1908.

Name of district.	Determination of tenant's rents.		Determination of revenue payable by proprietors in temporarily settled estates.					Remarks.
	Number of rents for determination.	Number of rents determined.	Number of Estates for determination.	Number of Estates determined.	Old jama payable to Government.	New jama.		
						Raiyatwari assets.	Payable to Government.	
1	2	3	4	5	6	7	8	9
Bakarganj	28,176	7,172	82	19	530	886	621	
Noakhali ...	1,4[illegible]	504	2	...	...	...	..	
Rajshahi ...	326	167	4	4	427	367	294	
Pabna	1,909	1,909	7	4	455	925	647	
Malda	4,677	4,119	6	2	...	...	...	

APPENDIX E.

Progress of Re-Settlement work in Assam during the year ending 30th September 1908.

Name of District	Number of villages in which				Expenditure during the year.	Remarks.
	Map and record corrected.	Soil classed.	Attestation completed	Rate Report submitted		
1	2	3	4	5	6	7
Darrang	82	620	620	730	51,936	...
Now gong	11	62	70	1,200	44,142	...
Total	93	682	690	1,930	96,078	...

APPENDIX F.

Progress of "Extension" Surveys in Assam for the year ending 30th September, 1908.

Name of district.	Total area of district (square miles.)	Area surveyed cadastrally by professional party (square miles.)	Area Surveyed in extension by village recorders.			Total area cadastrally surveyed (square miles)	Remarks.
			Previously (square miles).	During the year under report (square miles.)	Total (square miles.)		
1	2	3	4	5	6	7	8
Cachar	3,769	1,034	9	3	12	1,046	
Sylhet	5,380	545	247	3	250	795	
Goalpara	3,961	...	301	2	303	303	
Kamrup	3,858	1,966	253	7	260	2,226	
Darrang	3,398	857	326	22	348	1,205	
Nowgong	3,804	1,012	107	7	114	1,126	
Sibsagar	4,996	1,521	305	14	319	1,840	
Lakhimpur	4,207	269	162	77	239	508	
Garo Hills	3,140	...	22	8	30	30	

APPENDIX G.

Maintenance of the Record during the year ending the 30th September 1908 (whole province)

Name of District.	Numbers of tenancies or periodic pattas in area dealt with.	Number of mutations recorded			Percentage of column 5 on column 2	Remarks
		By formal procedure (Assam)	By summary procedure (Assam)	Total		
1	2	3	4	5	6	7
		Eastern Bengal				
Dacca (Government Estates)	6,273	...	...	554	8	
Mymensingh (Government Estates)	5,826	...	...	184	3	
Faridpur (Government Estates)	7,056	...	...	227	3	
Bakarganj — Government Estates	8,340	...	...	809	10	
Bakarganj — Court of wards	12,711	...	...	2,446	19	
Chittagong — Government Estates	92,062	...	...	3,058	3	
Chittagong — Court of wards	19,303	...	...	691	3	
Tippera — Government Estates	11,112	...	...	160	1	
Tippera — Court of wards	71,575	...	...	3,863	5	
Noakhali (Government Estates)	9,341	...	...	534	5	
Rajshahi (Government Estates)	493	...	...	11	2	
Dinajpur (Court of wards)	30,202	...	...	1,132	3	
Jalpaiguri (Government Estates)	26,123	...	...	2,412	9	
Rangpur (Government Estates)	478	...	...	3	1	
Bogra (Government Estates)	7,400	...	...	605	8	
Pabna (Government Estates)	16,032	...	...	94	1	
		Assam				
Cachar	48,582	1,550	8,855	10,405	21	
Sylhet	42,293	762	8,028	8,790	21	
Goalpara	1,285	31	6	37	3	
Kamrup	135,013	2,858	5,416	8,274	6	
Darrang	...	...	...	...	...	Districts are under resettlement
Nowgong	...	...	...	...	...	Districts are under resettlement
Sibsagar	1,44,773	1,694	4,341	6,035	4	
Lakhimpur	36,185	359	4,217	4,576	13	

APPENDIX H.

Condition of Survey marks in Assam during the year ending the 30th September 1908.

No.	Classification.	Total number of marks.	Total number found in good order.	Number found not in good order.		Total of Cols. 4 and 5 in good order on 1st October 1908	Number lost or left unvisited.
				Repaired.	Not Repaired.		
1	2	3		5	6	7	8
1	Trijunction prisms	15,840	13,818	460	223	14,278	1,339
2	Traverse stations shown by mounds and boughs	84,011	48,280	18,082	6,818	66,362	10,831
3	Kanungos' mounds including Jungle mounds	11,440	5,780	2,464	1,035	8,244	2,161
4	Country stones on theodolite stations	18,163	14,817	54	321	14,871	2,971
5	Prisms on boundaries of grants ...	6,770	6,332	91	...	6,423	347
6	Concrete blocks on do. ...	14,813	13,646	385	43	14,031	739
7	Country stones on do. ...	22,274	18,016	179	220	18,195	3,859
8	Mounds on do. ...	3,383	2,465	138	448	2,603	332
9	Brick pillars on do. ...	655	606	1	4	607	44
10	Iron posts	25	25	...	...	25	...
11	Brick pillars on town boundaries...	73	66	4	3	70	...
12	Theodolite stations in towns shown by concrete blocks ...	63	63	...	...	63	...
	Total ...	1,77,510	1,23,914	21,858	9,115	1,45,772	22,623

APPENDIX I.

Result of Inspection of Survey Marks in Eastern Bengal during the year ending the 30th September 1098.

Division and District.	Total number of estates surveyed under the Survey Act or B. T. Act.	Total number of estates in which permanent boundary marks are erected.	Number of marks erected in the estates mentioned in column 3.	Number of marks inspected during the year under report.	Result of inspecton of the marks shown in Column 5.			Number of damaged or missing marks restored.	Cost of restoration and how met.	Result of prosecution if any.
					Number in fair order.	Number damaged.	Number missing.			
1	2	3	4	5	6	7	8	9	10	11
Chittagong Division.				*Government Estates.*						
Chittagong	...	...	...	481	463	...	18	...	...	...
Noakhali	10	9	158	91	91	...	...	...	...	...
Rajshahi Division.										
Jalpaiguri	5	5	2,677	46	42	...	4	...	...	...
Bogra	2	2	579	579	579	...	...	...	...	...
Pabna	9	2	50	...	...	....	...	...	...	...
Malda	18	18	191	109	98	...	11	...	...	...
Dacca Division.				*Ward's Estates.*						
Bakarganj	3	3	1,101	1,069	1,041	19	9	...	...	...
Rajshahi Division.										
Dinajpur	1	1	649	254	254	...	...	...	...	...

No. 68 S & S. / G.

FROM

J. T. RANKIN, ESQ., I.C.S.,
SECRETARY TO THE BOARD OF REVENUE,
Eastern Bengal and Assam.

TO

THE CHIEF SECRETARY TO THE GOVERNMENT OF
EASTERN BENGAL AND ASSAM,

Dated, Dacca, the 3rd February, 1909.

The Hon'ble MR. H. SAVAGE, C.S.I., I.C.S.,
Member in charge.

SIR,

I am directed to submit, for the information and orders of Government, the reports of the Superintendent of Provincial Surveys, Bengal, and the Director, Department of Land Records, Eastern Bengal and Assam, on the Survey and Settlement operations in this Province during the survey year ending 30th September, 1908.

2. The report of the Director, Department of Land Records, was received by the Board on the 5th December, 1908, and I am to express regret that there has been further delay in printing the report locally, because the proofs which the press supplied had to be sent out to the Director of Land Records in camp for examination as he wanted to correct the proofs himself. The Board hope that when the Dacca Central Jail Press will be in a position to undertake the printing of reports there will be no such delays.

3. The Board's remarks on the two reports are enclosed.

I have the honour to be,
Sir,
Your most obedient servant,
J. T. RANKIN,
Secretary.

Board's Remarks on the Survey and Settlement Reports for the Survey year ending 30th September 1908.

In its letter No. 375 R.T., dated the 27th November, 1908, the Local Government sanctioned the establishment of a 'map-drawing' and reproduction office at Shillong, and allotted a sum of Rs. 50,000 for initial expenditure on plant and buildings and also an annual recurring expenditure of Rs. 30,000 on account of contingencies and establishment.

The Board have approved of the proposal of the Superintendent of Provincial Surveys to open his new office at Shillong at the beginning of the next financial year.

Para 6 of the Survey Report.—The question of fixing the powers of the Superintendent of Provincial Surveys has been referred to Government.

Para 10 of the Survey Report.—The Board have approved the suggestions made by the Surveyor-General, with regard to the new system of making Thana maps.

Para 11 of the Survey Report.—The Superintendent of Provincial Surveys will be requested to submit a report as to the result of the experiment, relating to the Permanent Advance System which is being tried in Bengal.

Para 23 of the Survey Report.—The Superintendent of Provincial Surveys will be asked to try 'Simul trees' as survey-marks in Eastern Bengal districts. This has been suggested by the Director of Land Records in paragraph 13 of the Settlement Report.

Para 52 of the Survey Report.—The Board approve of the suggestions made herein, and suggest that in all cases, in which special measures have been taken to permanently demarcate a boundary, the Local Superintendent of Surveys should be empowered to carry out a reasonable amount of inspection.

Para 54 of the Survey Report.—The Settlement Officer of Jalpaiguri will be instructed (through the Director of Land Records) to take steps to ensure permanency of boundary.

Para 67 of the Survey Report.—The question of reproduction of maps for attestation purposes will be discussed in the next year's report, in consultation with the Superintendent of Provincial Surveys.

Para 80 of the Survey Report.—The Board endorse the remarks made by the Superintendent of Provincial Surveys with regard to the officers mentioned in the paragraph, under review.

During the year, under report, a sum of Rs. 1,79,352 was expended by the Superintendent, Provincial Surveys, Bengal, of which Rs. 1,50,658 was disbursed on account of traverse work, and the rest for maps.

An area of 2694 square miles of traverse survey was completed, during the year, under review, in the four districts—Dacca, Mymensingh, Faridpur and Jalpaiguri—at varying cost rates given in Appendix I—Part B.

Para 12 of the Director of Land Record's Report.—The subject of mutation fees is under the consideration of the Board and a separate report will be submitted to Government.

Para 13 of the Director of Land Record's Report.—The Board approve of the Director of Land Record's suggestion to try "Simul trees" as survey-marks in Eastern Bengal districts.

Para 14 of the Director of Land Record's Report.—The Director of Land Records will be asked to submit specific proposals for abolition of these schools.

Para 23 of the Director of Land Record's Report.—The question of allowing selected landlords the summary procedure, referred to in this paragraph, will form the subject-matter of a separate correspondence, in consultation with the Director of Land Records.

Para 25 of the Director of Land Record's Report.—The Board have approved the Director of Land Record's scheme for distribution of the surplus Vandyke maps, free of cost, to selected raiyats in each village in Darrang and Nowgong districts—the gaonbura of the village being the first to receive a copy.

Para 27 of the Director of Land Record's Report.—The question is still under consideration of the Board.

Para 28 of the Director of Land Record's Report.—The Board have approved the proposal. The question of the necessary amendment to the Land Records Manual, Assam, has been referred to Government.

Para 30 of the Director of Land Record's Report.—The Board are awaiting specific proposals from the Director of Land Records for one or more of the centres where accommodation is most needed.

Para 32 of the Director of Land Record's Report.—It has been represented that it would not be convenient to spare all the junior officers at one and the same time. They will therefore have to be trained in two or more batches.

Para 33 of the Director of Land Record's Report.—A proposal, subsequently received from the Director of Land Records, for the construction of an additional cabin and a bath-room in the launch has been recommended to Government.

Para 35 of the Director of Land Record's Report.—The question of a revised table of standard rates will form the nucleus of a separate correspondence in communication with the Director of Land Records.

The thanks of the Board are due to Mr. Beatson-Bell and to Captain Hirst for the very efficient administration of their respective departments and for their interesting and careful reports.

RESOLUTION ON THE SURVEY AND SETTLEMENT REPORTS, EASTERN BENGAL AND ASSAM, FOR THE YEAR ENDING THE 30TH SEPTEMBER 1908.

Extract from the Proceedings of the Lieutenant-Governor of Eastern Bengal and Assam in the Revenue Department, No. 1266*R., dated the* 8*th May* 1909.

READ—

The Survey and Settlement Reports for the year ending the 30th September 1908, and the remarks recorded on them by the Board of Revenue.

RESOLUTION.

THE Survey and Settlement Reports were submitted to the Board of Revenue in excellent time, and Captain Hirst, Superintendent of Provincial Surveys, who was in charge throughout the year of the traverse survey operations in two provinces, is especially to be congratulated upon the promptitude with which he prepared and forwarded his report. There was some delay in printing the reports in Dacca, due to the fact that the Central Jail Press at Dacca is not yet in a position to undertake ordinary Government work; they were, however, submitted to the Government of India by the date on which they were due.

2. The year has been one of very hard work for the Superintendent of Provincial Surveys, who has had to deal with the task of organizing two separate services for Bengal and Eastern Bengal and Assam, and of preparing for the division of work between the two provinces that has since taken place. Captain Hirst has found time, however, to follow up a most promising reform in the system of survey accounts which should prove of much value in the future. It has already been introduced tentatively in Bengal, and it is hoped that it may be brought into operation before long in this Province. His report also contains observations and suggestions for improvement on several other subjects, and his work of organisation has been characterised by much care and thoroughness. As it is probable that the reduction in the budget estimates that has been necessitated by the present financial position will considerably curtail the area in which the traverse survey work is carried out in the current year, Captain Hirst may have time to consolidate his administration of his Department, and to introduce reforms which could not well be brought into operation while his whole establishment was working at high pressure.

3. The general remarks that have been made by the Superintendent on the subject of the demarcation of field boundaries, and his recommendation of the Assam system of planting trees at the corners of field boundaries, and at other salient points on boundary-lines, find an echo in the report of the Director of Land Records, and the Lieutenant-Governor will be glad to hear in due course from the Board of Revenue of the practical steps that have been taken to encourage raiyats to plant trees in the manner indicated, and to introduce the planting of them by the Government officers responsible for the laying and maintenance of such boundaries. Captain Hirst's further observations as to the relaying of boundaries generally, which were written with special reference to the work that has been done in the district of Jalpaiguri, are of application to almost the whole of this Province. The climatic difficulties that militate against the preservation of well-defined boundaries render it specially necessary to record boundaries in our maps and papers, with such full details, and, at the same time, with such scientific accuracy as to ensure that they will be easily relaid again on the spot when occasion requires. The Board will be asked whether it would not be possible for Captain Hirst to embody his recommendations in the form of a simple set of rules which would ensure uniformity and efficiency in dealing with these boundary questions throughout the Province.

3. The work of the Survey Drawing Office and the preparation and reproduction of maps of various kinds have of late years assumed an importance in our survey proceedings more proportionate to the real value of the maps that are thus produced. The publication of cheap reproductions of village maps, and the printing of simple thana maps for the areas which have been cadastrally surveyed, greatly affect the usefulness and popularity of our survey and settlement operations, and Mr. Beatson

Bell and Captain Hirst are rightly devoting considerable labour and a fair proportion of the funds at their disposal to perfecting the equipment of the Drawing Office and the system upon which it is worked. It is hoped that before the end of the current year a Drawing Office will have been established in Shillong capable of turning out all the work that may be required of it in the course of the rapidly-expanding survey operations in the Province.

5. The Director of Land Records reviewed the settlement work which was in progress in the Province at considerable length in his report for the year 1906-1907, when he described the actual state of affairs as regards the cadastral survey of each district in the Province. He has accordingly submitted but a brief report of progress in the current year, referring where necessary to his previous review, but avoiding repetition of the details contained in it. The form of the report which has now been submitted has the approval of the Lieutenant-Governor, but it is noted that the information given in some of the appendices is not adequate, and the forms of these appendices require in some cases to be amplified. The Board of Revenue will be addressed on this subject, and also as to the cost of the settlement proceedings in various districts, concerning which the Director of Land Records has again failed to give sufficient information, although he has promised a special report on the subject of cost rates at an early date. Sir Lancelot Hare is quite willing to accept Mr. Beatson Bell's assurances that the question of economy in the operations has received his constant attention, but it has become necessary to ask the Board of Revenue to insist that full information shall be given in future reports upon this subject. The expenditure in some districts has been very heavy, and although it is well known to Government that this expenditure has been fully warranted, it is essential that the cost of the operations should be set out fully, with the reasons that justify that cost, for general information.

6. In Appendix A to his report the Director gives some interesting figures showing the total area of the plains districts of the Province and of the Gáro Hills, the proportion of permanently-settled to temporarily-settled land in each district, and the areas for which cadastral maps have been prepared or are now in the course of preparation. These statistics show that of the area of the Eastern Bengal districts five-sixths are permanently settled, while of the area of the Assam plains districts and the Gáro Hills five-sixths are temporarily settled, almost the whole of the permanently-settled land in Assam being included in the districts of Sylhet and Goálpára. As regards the progress of survey and settlement operations it is difficult to compare the two parts of the Province, as the districts of the Assam Valley include a large amount of hill and jungle still unfit for cadastral survey, whereas there is comparatively little of such waste land in the districts of Eastern Bengal. This may be exemplified by a comparison of the figures for the Bakarganj district and the Sibságar district. In both of these areas the whole of the cultivated or fallow land fit for cadastral survey have been mapped, but this area amounts to only 1,840 square miles out of a total of 4,996 square miles in Sibsagar, whilst 3,230 square miles have been cadastrally surveyed out of a total area of 3,750 square miles in Bakarganj. With the exception of the districts of Sylhet and Goálpára the plains districts of Assam have now been almost entirely brought under cadastral survey, but these two districts and the districts of Eastern Bengal will still afford work for survey and settlement operations for some twenty years to come.

7. The winding up of the settlement of the Bakarganj district has not yet been completed, and comparatively small progress was made during the year with the very heavy case work which has to be dealt with in this district. This is, however, being rapidly dealt with now by a large staff of officers, and there is reason to hope that it will be finally disposed of by the end of the current calendar year. The work of recovering their share of the cost of the proceedings from the landlords and tenants of the district has proceeded without friction, and a very large sum of money has been paid in without recourse to coercive measures. The progress made by the large settlement parties at work in the districts of Faridpur and Jalpaiguri has been good, and the programme of work set out for these parties has been carried through in spite of many difficulties. The decision to bring the greater portion of the smaller survey and settlement operations in other districts under the control of the Director of Land Records has proved successful, and there has been a great improvement in the method with which these settlements have been carried out and in the quality of the supervision exercised over them. They are being gradually brought into line with the more scientific and accurate operations which are in progress elsewhere in the province.

8. In the ninth paragraph of his report Mr. Beatson Bell has given some interesting figures on the subject of the assessment of revenue in the districts of Darrang and Nowgong in the Assam Valley, which are now under re-settlement. These show that the system of soil factors and unit rates which was introduced by Sir Bampfylde Fuller has achieved the object with which it was designed, that of redistributing the burden of land revenue more equitably, without enhancing the total revenue obtained from the district. The statistics show that there has been a slight reduction in the assessment per settled *bigha* in almost all parts of each of these districts, while the percentage of the gross produce which is now taken as the revenue after re-settlement is only 13·4 in the district of Nowgong, and 13·3 in the district of Darrang. In no single group of villages does this percentage amount to the 20 per cent. of the gross produce which has so often been recommended to Government by severe critics of its land revenue policy as the ideal assessment to which Government demands should be reduced. But this redistribution has of course added somewhat to the burdens of those possessing the best lands, while reducing the pressure on the poorer cultivators, whose fields are less productive, and in order to mitigate any hardship among the former class rules have been introduced by which enhancements which amount to a high percentage of the former rent shall be spread over a term of years, and shall not be imposed at once. It was hoped that it would be possible to secure the automatic working of these rules, so that cases of undue enhancement would invariably be brought to light even where the tenants had lodged no protest against the new rents, but this has not been found possible in the circumstances of the work in Assam, and consequently it is imperative that full opportunity should be given to all tenants to complain if their rents have been unduly enhanced, and steps have been taken to secure this. The Board will be asked to instruct the Director to make a special inspection during this rainy season in order to ensure that this point is being carefully and fully considered by those officers who are engaged in completing the operations in the districts of Nowgong and Darrang.

9. The subject of the maintenance of the record has been still further considered in the course of the year, but it seems doubtful whether in the present state of the provincial and Imperial finances it will be possible to introduce any far-reaching system with this object in the current year. A noticeable advance towards a system of permanent maintenance of the records has, however, been made in the district of Mymensingh, where the Settlement Department is now carrying through the work of cadastral survey and record writing with the help of local men belonging to villages within the area covered by the operations, who have been trained to the work with a view to their becoming eventually land recorders under a new system of maintenance. It is doubtful whether it will be possible to deal fully with the question of the maintenance of the records in Chittagong until the district comes again under resettlement, but a full report on this subject will shortly be submitted to the Government of India.

11. Among the various reforms which have been introduced into the system of preparing and maintaining the records in different parts of the Province may be noted the introduction of personal attestation as an addition to the system of record writing in the Assam Valley district. This attestation of the rent roll in the presence of each raiyat, after it has been finally compiled in accordance with the classification of soils and the rent rates sanctioned, has been introduced in the resettlement of the district of Lakhimpur.

The training of junior officers of Government in Survey and Settlement procedure has been further developed and placed upon a more permanent footing during the past year, and excellent work was done during the past cold weather, in accordance with rules drawn up by Mr. Beatson Bell, by the members of the Indian Civil Service, Deputy Collectors, and Sub-Deputy Collectors, who were attached to the training camp.

A complete scheme for the printing of the final record has been worked out by Mr. Jack and Mr. Beatson Bell for the district of Faridpur, and has been sent up to the Government of India for sanction. It is hoped that by this reform much useless expense in the copying of the record by hand will be avoided, that reproductions of the records will be more accurate than they have hitherto been, and that it will be possible to distribute copies of the record far more widely among those persons who are interested in it than has hitherto been possible.

12. Mr. Beatson Bell has continued to render most valuable service to Government in his post as Director of Land Records, and the Lieutenant-Governor desires to express his appreciation of the energy and ability with which Captain Hirst has met the difficulties which have been encountered in the organisation of a separate

Survey Department for each Province during the past year. Work on the major settlements has been carried through by the Settlement Officers with unremitting labour and with admirable tact, and Mr. Briscoe, who was for some time placed in sole charge of the important operations in the districts of Faridpur and Bakarganj, maintained the high standard of work set by Mr. Jack with remarkable success. Among the subordinate officers of the Settlement Department the Lieutenant-Governor is glad to notice the special commendation bestowed on Maulvi Muhammad Abdul Momin, whose work in preparing for the inception of settlement proceedings in the district of Mymensingh has been of exceptional quality.

ORDER.—Ordered that this Resolution be published in the *Eastern Bengal and Assam Gazette*, and that a copy of it, with copy of each of the two reports, be submitted to the Government of India.

By order of the Lieutenant-Governor,

P. C. LYON,

Chief Secretary to the Government of Eastern Bengal and Assam.

MEMO. No. R.

Dated Shillong, the 1909.

COPY, with a copy of the Survey Report, forwarded to the Deputy Surveyor General in Charge, Revenue Branch, Survey of India, for information.

By order of the Lieutenant-Governor,

V. DAWSON,

Under-Secretary to the Government of Eastern Bengal and Assam.

MEMO. No. R.

Dated Shillong, the 1909.

COPY, forwarded to the Secretary to the Board of Revenue, Eastern Bengal and Assam, for information of the Board.

By order of the Lieutenant-Governor,

V. DAWSON,

Under-Secretary to the Government of Eastern Bengal and Assam.

E. B. & A. S. P. O (R. & A.) No. 442—350+3 11-5-1909.

REPORT

ON THE

SURVEY & SETTLEMENT OPERATIONS

IN

EASTERN BENGAL AND ASSAM

FOR THE

YEAR ENDING THE 30TH SEPTEMBER 1909

DACCA

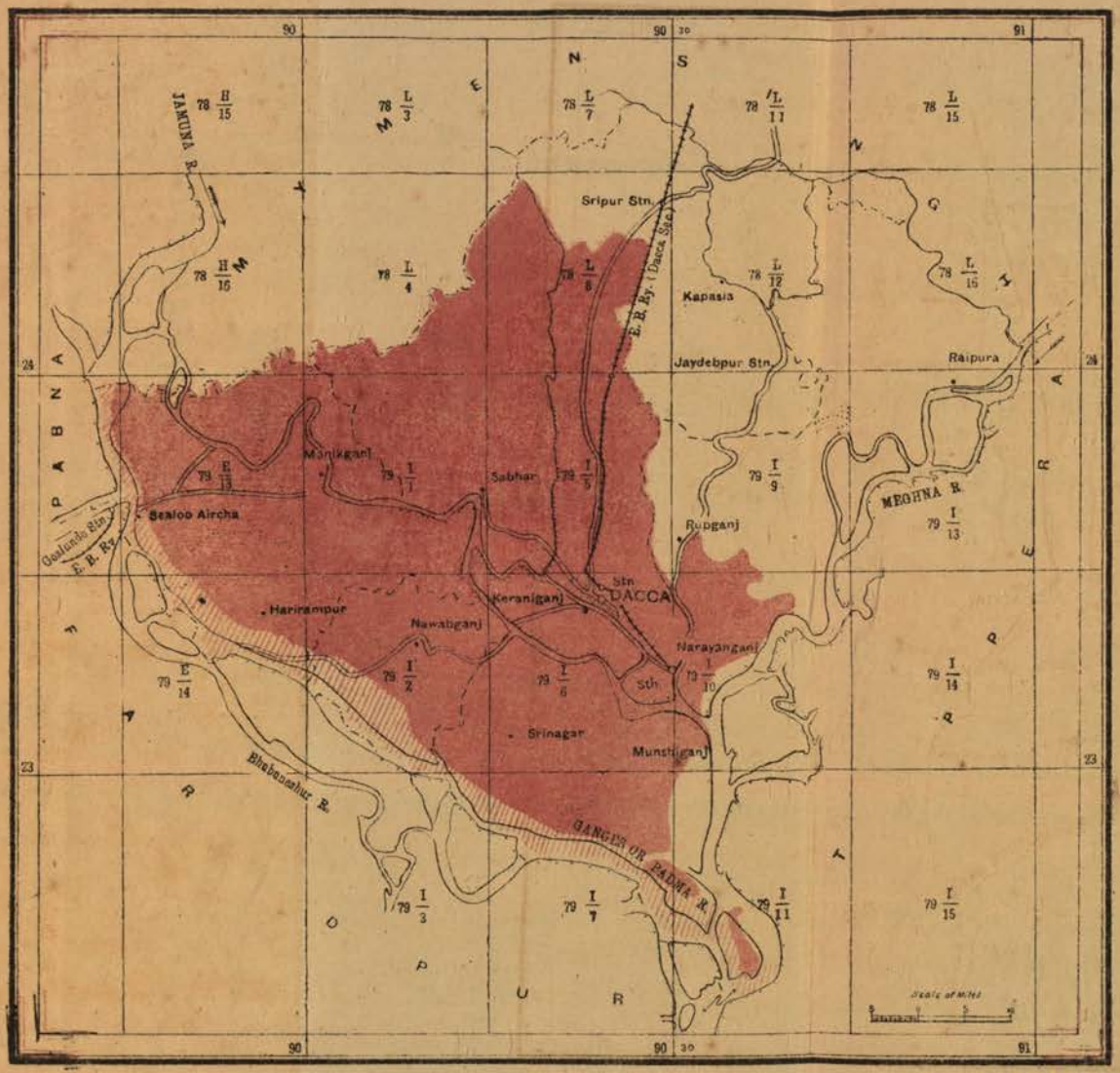
PRINTED AT HIS HONOUR'S CAMP PRESS

1910

English 2 Shillings.] [*Price Re. 1-8.*

EASTERN BENGAL & ASSAM

INDEX MAP OF DISTRICT DACCA



Printed in E. B. & A. D. O.

REFERENCES

District Boundary

Sub-Division do

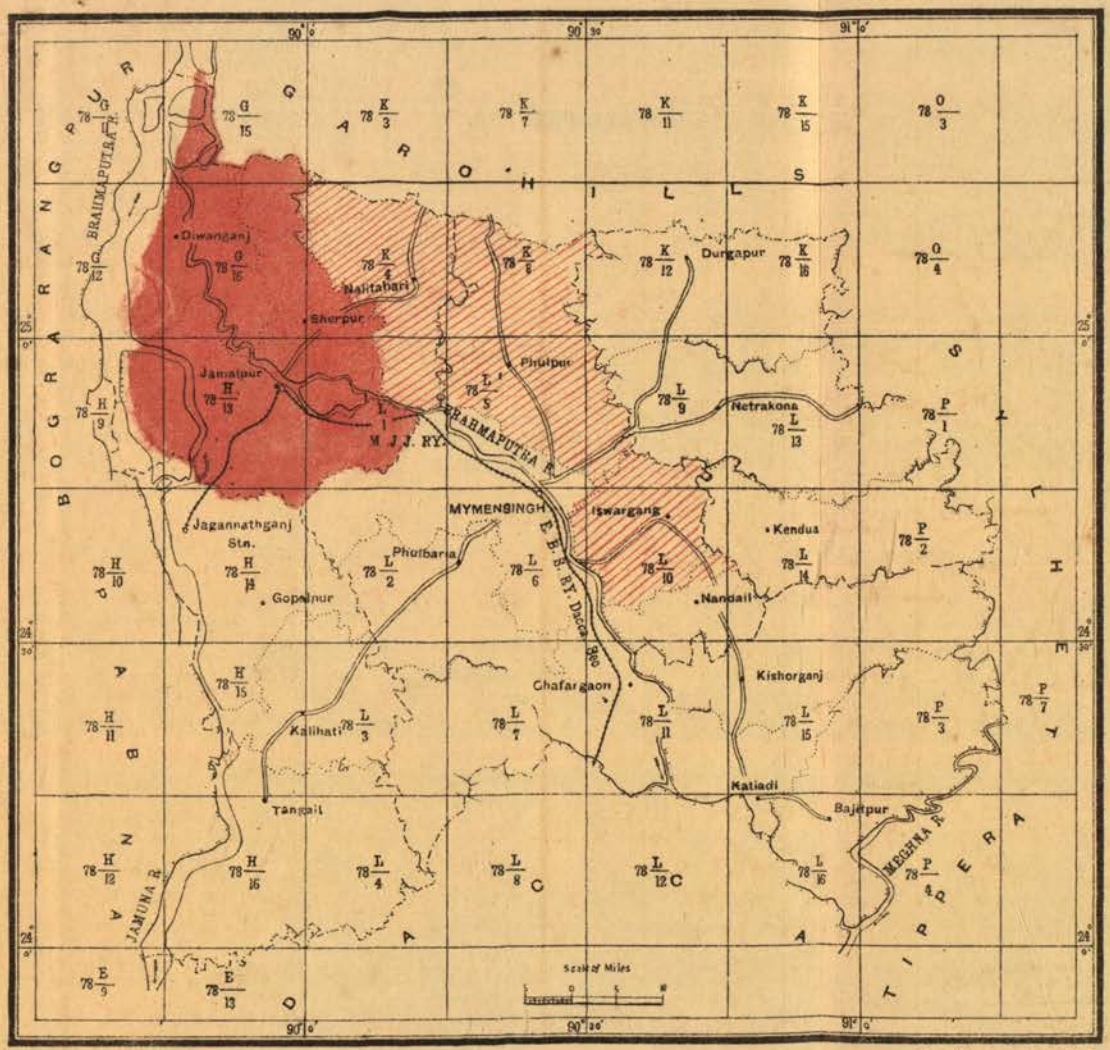
Thana do

Previously Traversed

Traversed in Season 1908-09

EASTERN BENGAL & ASSAM.

INDEX MAP OF DISTRICT MYMENSINGH



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REFERENCES

Province Boundary

District do

Division do

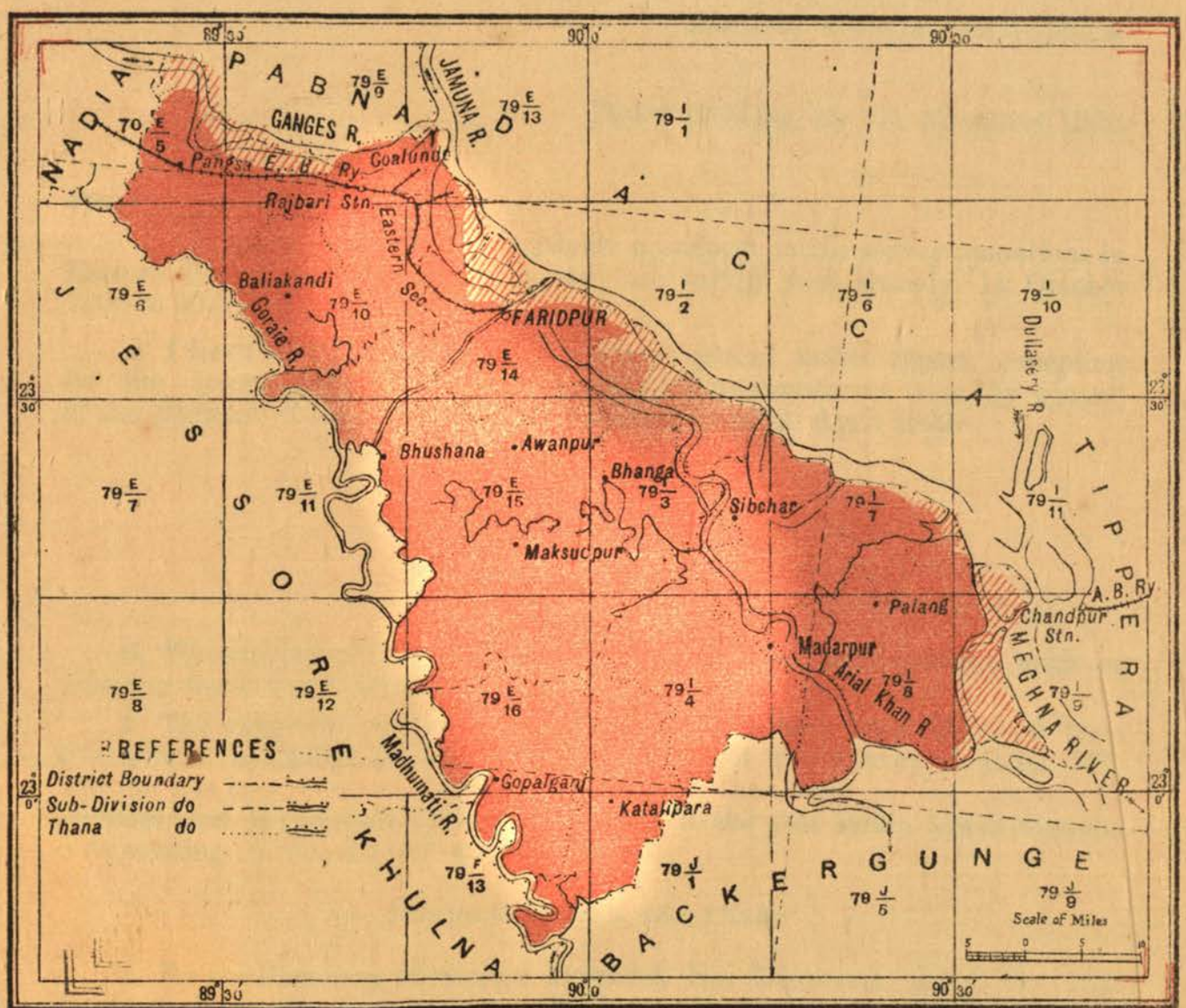
Thana do

Previously Traversed

Traversed in Season 1908-09.

EASTERN BENGAL & ASSAM.

INDEX MAP OF DISTRICT FARIDPUR

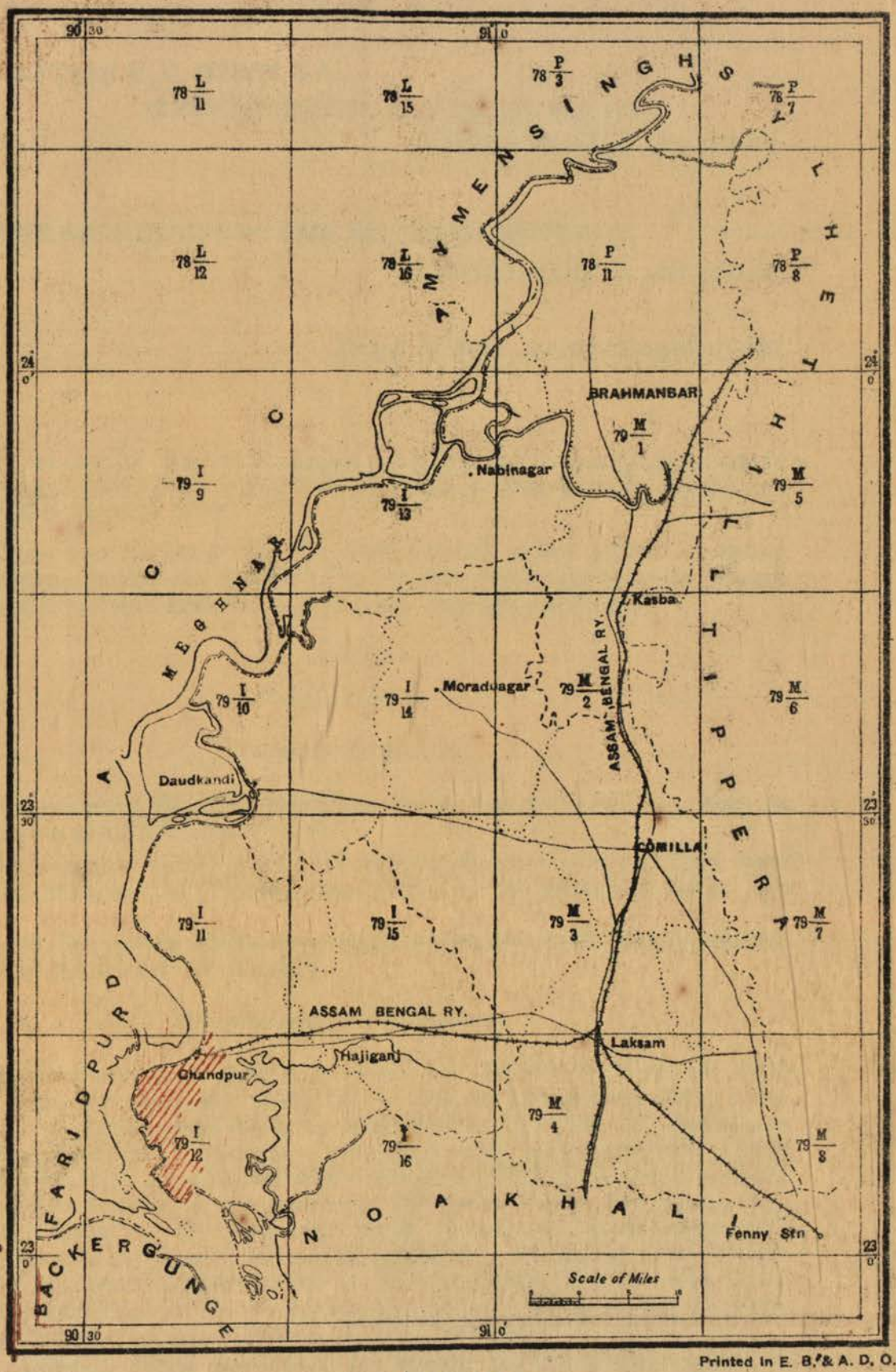


Previously Traversed

Traversed in season 1908-09

EASTERN BENGAL & ASSAM.

INDEX MAP OF DISTRICT TIPPERA



Printed in E. B. & A. D. O.

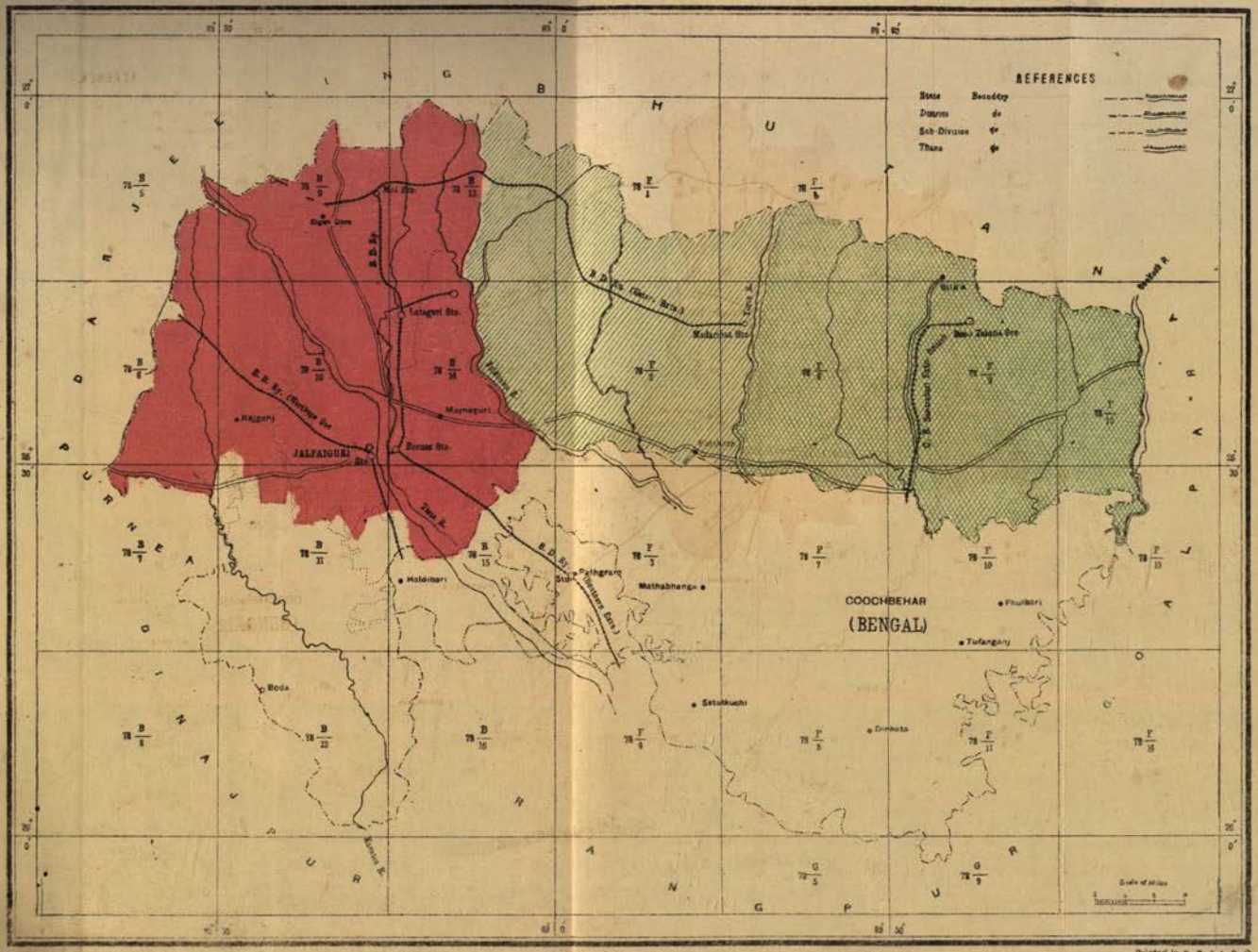
REFERENCES

District	Boundary	---.---.---
Sub Division	do	-------
Thana	do	.....

Traversed in season 1908-09

EASTERN BENGAL & ASSAM.

INDEX MAP OF DISTRICT JALPAIGURI



Surveyed in season 1906-07

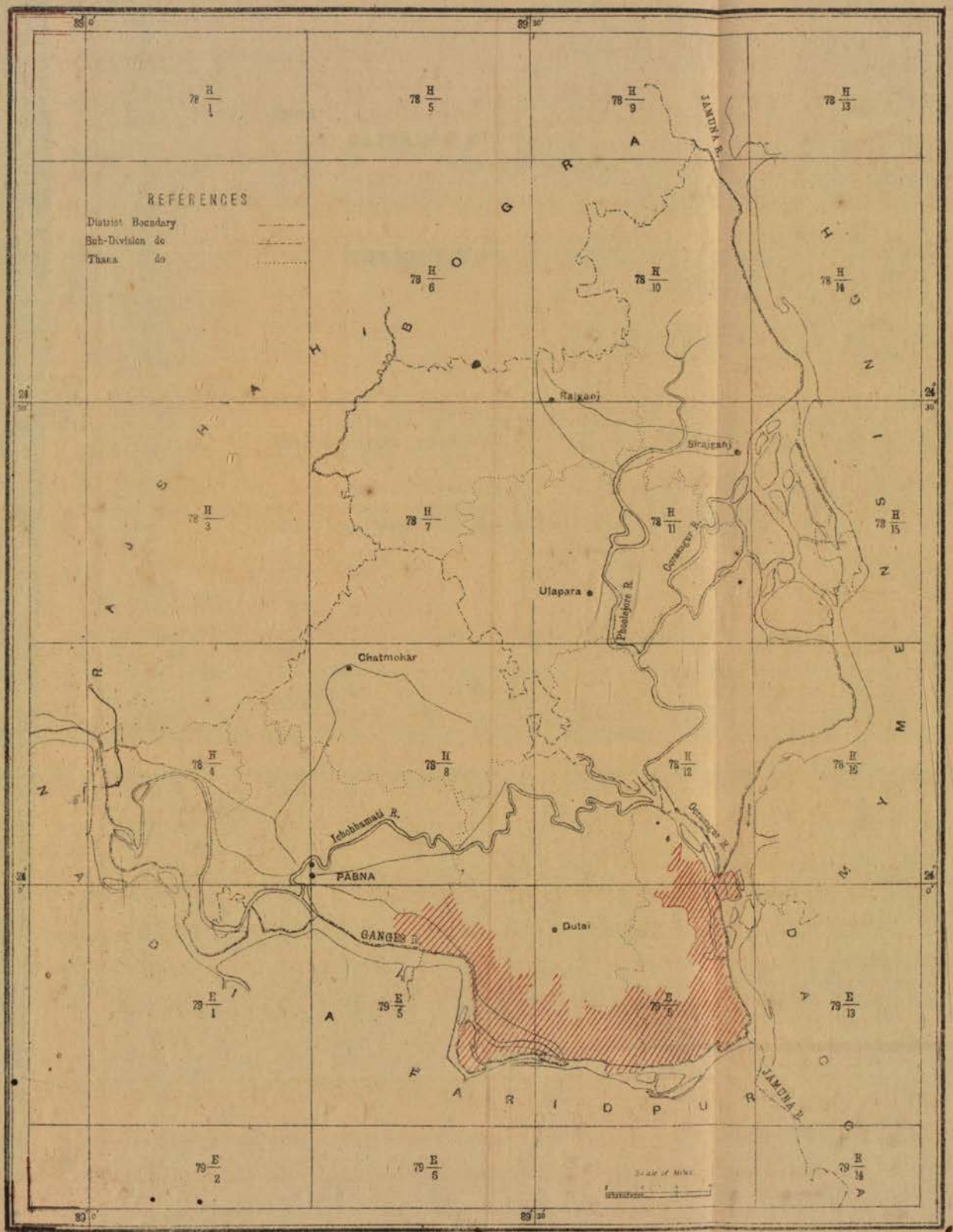
Do. do. 1907-08

(Traversed season 1907-08) in season 1908-09. stone embedded at all jute trijunctions & simul tree cuttings Planted 5 Fts the Mag. North of all station marks & earthen mounds raised round them.

Printed by S. S. & A. O.

EASTERN BENGAL & ASSAM.

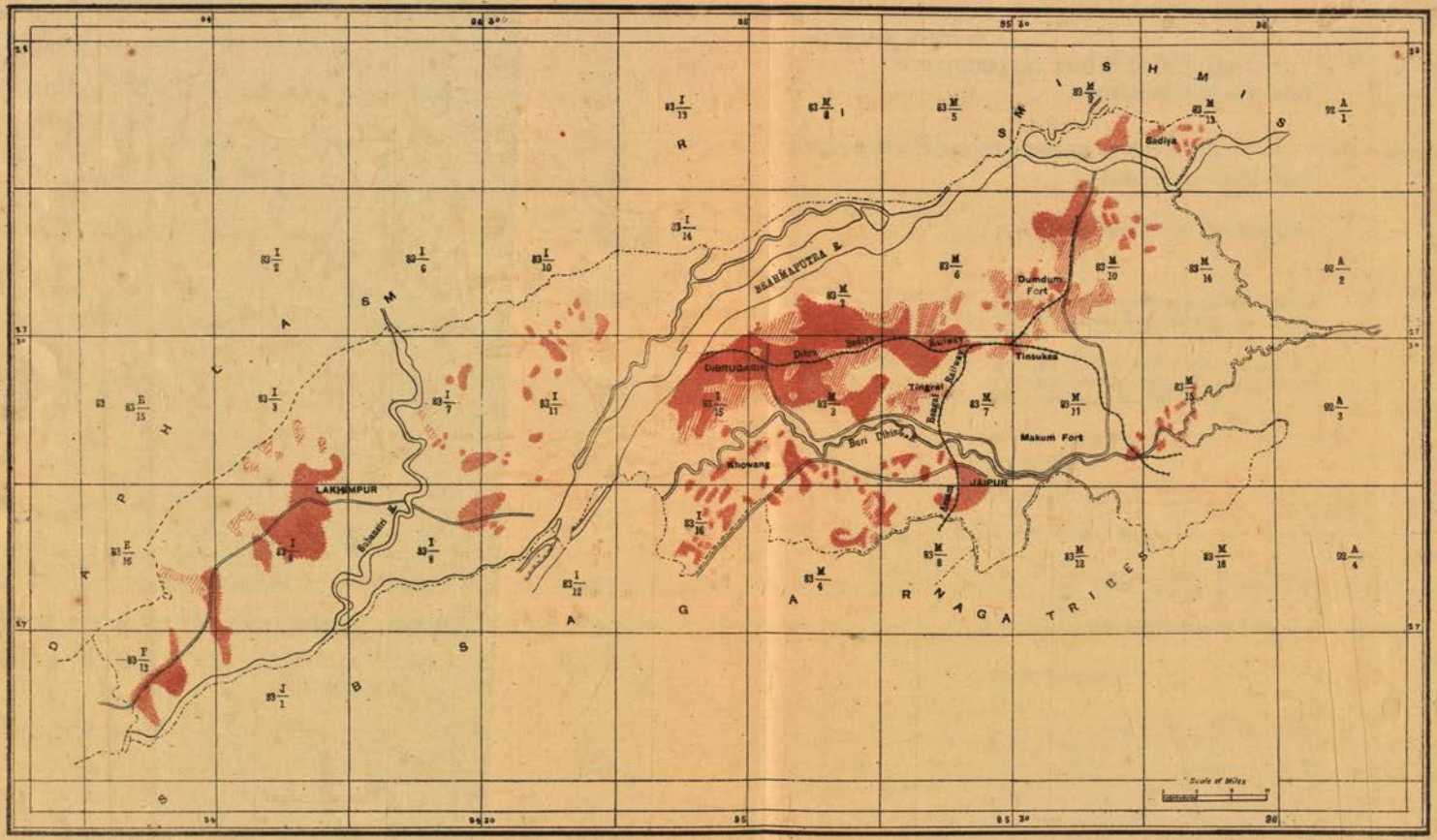
INDEX MAP OF DISTIRCT PABNA



Printed in E. B. & A. D. O.

EASTERN BENGAL & ASSAM.

INDEX MAP OF DISTRICT LAKHIMPUR



REFERENCES

[Surveyed in Season 1908-09.]

Tea Garden area ... ... 13.68 Sq Mile

Village area ... ... 50.90 Do.

Note.- The areas Surveyed during the several season. are too scattered to be shown separately.

REFERENCES

District Boundary ———

Subdivision do - - - - -

REFERENCES

Tea Garden area surveyed up to season 1908 09.

Village area surveyed up to season Do.

Printed in E. B. & A. D. O

3035

No. ———.

R.—7

FROM

CAPTAIN F. C. HIRST, I.A.,

SUPERINTENDENT, PROVINCIAL SURVEYS,

EASTERN BENGAL AND ASSAM,

To

THE SECRETARY TO THE BOARD OF REVENUE,

EASTERN BENGAL AND ASSAM.

Dated Shillong, the 8th November 1909.

SIR,

I HAVE the honour to submit my report on the survey operations in Eastern Bengal and Assam during the last survey year, namely, 1st October 1908 to 30th September 1909.

2. I have been in charge for the whole period under report, excepting for the Assam portion of the work, which was transferred from the control of the Director of Land Records to my control from 1st April 1909.

CHAPTER I.

GENERAL REMARKS.

3. The outturn of the year, excluding linear and petty surveys, such as relaying work, was 2,432 square miles.

4. The magnetic variations given in this report have been obtained from the Officer in charge of the Magnetic Party of the Survey of India. No attempt has been made to give a closer variation than that to the nearest 15 minutes and the values given only apply to the year 1909; the declination is decreasing by about 3′-30″ annually.

CHANGES DURING THE YEAR.

5. By the Secretary of State's Despatch No. 7Revenue, dated the 15th January 1909, the proposals submitted to him by the Government of India, in its letter No. 301Finance, dated the 15th October 1908, for the reorganization of Bengal and Eastern Bengal and Assam Surveys were sanctioned. Those proposals embraced the complete separation of the work of the two Provinces, an independent department being allowed for each. Since this change took place in the course of the year, my report, of necessity, must cover some work which was not carried out under my orders. On the 1st October 1908, the Survey and Drawing Office work in Eastern Bengal districts was under me as Superintendent of Provincial Surveys, Bengal, and the Assam work was under the Director of Land Records of this Province.

The Drawing Office programme for Assam, on 1st October 1908, was carried out by the Superintendent of the Government Press at Shillong. From 1st April 1909 I took over the Assam Survey and Drawing Office work. The result of the above is that the work of the Drawing Office falls under three heads:—

(*a*) That done by me in the Bengal Drawing Office;

(*b*) that executed by me in Shillong since 1st April 1909; and

(*c*) that carried out by the Superintendent of Government Printing in Shillong previous to the 1st April 1909.

In the same way the Assam Traverse work was partly controlled by the Director of Land Records and partly by me.

For convenience of record I have included, with the concurrence of the Director of Land Records, the details of all the abovementioned items in this report.

6. In paragraph 6 of my report for the survey year 1907-08, I referred to the necessity for my powers being fixed with due reference to the responsibility of my position. The main question is still undecided, but the situation has been considerably improved by certain powers having been delegated to me from time to time. At the same time, until my powers are fixed, it is impossible for me to assign limits of powers to my assistants, and, on this account, a considerable amount of unnecessary correspondence prevails both in my office and in those under me. This hampers smooth working.

7. With reference to paragraph 10 of my report for last year, in which I made certain remarks regarding the future of mapping in the local Drawing Office, it is necessary to state that the question is still under discussion.

A misunderstanding has occurred with regard to the details of the scheme mentioned by me in my last report, and it has necessitated my recasting my proposals. My modified suggestions are now, I believe, in line with those which will be accepted for Bengal Surveys, and orders on them are expected at any time.

8. In paragraph 11 of my last report I stated that I hoped that in future the cost rates given in the appendices of reports would be correct. My assumption was premature, as it anticipated the introduction of a new system of accounts during the year under report. I have sent to the Board of Revenue a draft Accounts Manual which covers the new accounts system, and I only await final orders for the introduction of that system.

In addition to the above, the accounts adjustments between this Province and Bengal, owing to the reorganization, is not quite complete. Lastly, all instruments on our stocks were handed over to the Local Government, free of charge, by the Government of India, from April 1st, 1909. Up to that date on our cost rates we show, for the use of the instruments, a charge of 4 per cent. above the actual cost of every survey operation, but from April 1st, 1909, no contribution for cost of instruments will be made, and the necessary adjustment has not yet been completed.

For the above reasons I regret that once more the cost rate figures given in my report must not be looked upon as final.

9. The headquarters of the new Department have been fixed at Shillong, and considering all things, it can, I think, be said that the new arrangements are well on their way to settling down on permanent lines of organization. It may be advisable perhaps to review the situation here, so that in my next report it will be possible to see exactly what progress has been made :—

(*a*) *Accounts.*—As already stated, full preparations have now been made to bring our accounts system into line with that used by other Departments in this Province.

(*b*) *Traverse Sections.*—These have found their feet, and all that remains to be done is the final overhauling of the equipment of each section. It has been necessary to make a great many transfers in equipment, and these are now about to be finally adjusted in stock lists. I had hoped to be able to compile equipment lists for each section on a basis which bore a definite relation to programme; I find, however, that programmes fluctuate too much at present to admit of this; perhaps, later on, it may be possible to standardize our equipments.

(*c*) *Forms.*—(*i*) *Accounts.*—These have been recast with a view to the introduction of the new system, and, as far as possible, forms of standard use in the Province have been adopted.

(*ii*) *Professional.*—These have been revised and considerably reduced in number. The reduction has been made by making title pages, etc., for different volumes of records suitable for several different kinds of work. Most of the forms are still, substantially, those in use in the Survey of India.

I have taken this opportunity of throwing all forms referring to professional procedure, but which are not adjuncts of office routine, under this head.

(*iii*) *Office forms.*—These are practically revised and very great reductions have been made in their numbers.

With regard to forms generally, it is proposed to bind up volumes containing a full set of each kind of forms used, to issue one volume to each responsible officer, and to supply him, as far as may be necessary, with a set of brief instructions as to their use.

(*d*) In the Secretary of State's Despatch No. 7Revenue, dated the 15th January 1909, certain fixed staffs were sanctioned, on definite rates of pay, for all the inferior appointments in the Department. Sometimes, however (traverse surveyors, etc.), no definite scheme of increments was sanctioned. Further, the question of local allowances for the staff was not included in the despatch. Lastly, the proportion of pensionable to non-pensionable appointments was not always fixed. In every case in which definite sanction was received, the establishments, etc., have been adjusted accordingly; in other cases, full proposals have been submitted to the Board, and Government orders are awaited.

These adjustments have entailed a very great amount of detailed labour.

(*e*) *Office accommodation.*—It was decided that, pending the removal of certain Government offices now stationed in Shillong to Dacca, I should make temporary arrangements for office accommodation; the result is that at present I have six offices (excluding two new ones for the Reproduction Office and its record-room) scattered about in Shillong. This arrangement has considerable disadvantages, but it was necessary in the interests of economy. I have put forward proposals to the Board of Revenue for the placing of my offices in one place, and I hope that it will be found possible to accept the suggestions which I have made.

During the year the Public Works Department has erected a Reproduction Office and fireproof record-room in Shillong. These buildings are not yet occupied, as they have only just been completed. I have issued orders for their occupation with the least possible delay.

(*f*) *Drawing Office.*—(*i*) The Reproduction Section of this office is, at present, the most backward portion of the reorganization. The hitch has occurred in two ways:—(*a*) the buildings are only just completed and (*b*) the plant indented for from England, although some of it has arrived in India, has not yet reached Shillong. Every possible arrangement has been made for the immediate installation of the machinery when it arrives, and, in the meantime, we have been able to meet all demands made with the plant of the old Assam Vandyke Press supplemented by certain items obtained from the Surveyor-General's Office.

Owing to a shorter supply of reproduction work being received during the year than was anticipated, no failure in programme has occurred, nor do I consider that any failure is likely to occur.

(*ii*) The Drawing Office will eventually include a Map Issue Office, and a Record Section for cadastral and other maps. It is proposed to take over all the old Revenue Survey volumes from the Surveyor-General and to rack them in Shillong. The details for the Map Issue Office and taking over of original

records from the Surveyor-General are not yet worked out, but they will be forwarded to the Board before November 25th, 1909. Later on it will probably be necessary to include a Copying Section in this office.

(*g*) With regard to my final cadre of superior officers definite proposals have been submitted by this Government to the Government of India, and orders are expected at any time.

10. I may mention that some of the incompleted portions of work referred to in the last paragraph would have been dealt with by me during the year, if a tonga accident on the 9th July had not seriously incapacitated me, as it still does, from heavy work. In addition to this the curtailment of my budget for the financial year 1908-09 entailed a great amount of re-adjustment which, coming as it did in the first year of life of the Department, has acted as a set back and not—as was hoped in paragraph 2 of the Government Resolution on Survey and Settlement Reports for last year—as a fortunate occurrence which would admit of consolidating my Department. In the Government Resolution it was assumed that a reduced budget would mean less pressure on the establishment, and this would, of course, have been the case if the limits of financial and survey year coincided.

11. With reference to paragraph 19 of my last report, the Surveyor-General has called the attention of the Government of India to certain remarks made by me in paragraph 49 of my report for the same year in the Bengal Surveys. The Surveyor-General took grave exception to my remarks, saying that they were "unsound and likely to affect seriously the value of any traverse and cadastral work to which they might be applied." I was asked to apply to the Surveyor-General for information on the subject, and this I have done. The matter is still under correspondence, but I take this opportunity of pointing out that in my reports for both Provinces I merely made certain remarks which clearly showed that I suggested no change in the methods which we employ; in the Bengal report, I definitely said that "our method of comparing" is the only one possible; that method is the one which has been employed in the Survey of India for a great many years, and will be employed by me so long as I remain in charge of this Department.

12. On taking over the Assam Reproduction Office on the 1st April 1909, I found that a great deal of colour printing was being done for other Departments of Government, with the result that the overtime pay of the staff was very heavy. On careful examination it was found that much of the work was avoidable. The original system was that the Reproduction Office considered it essential that if another Department wished for a map with ten different colours in it, the map must of necessity be made to show ten colours, although an equally practical result might perhaps be obtained by using three colours. On examination it was found that a very great reduction in the number of colours was possible and, by the co-operation of those who forwarded printing orders, we have now been able to reduce this class of work enormously and are yet able to give applicants what they desire. I do not advocate any system by which I should be at liberty to refuse to carry out work which appears to me to be unnecessary, but I consider it essential that all officers who require coloured maps printed should first consult me as to the most economical way in which the result aimed at can be attained. I have forwarded a set of notes to the Board of Revenue which give suggested rules for the regulation of extra-departmental work of this nature.

The above remarks must not be taken as a reflection on Mr. Hill, who was in charge of the Assam Reproduction Office until April 1st, 1909; I found that there was considerable opposition to any attempt on my part to introduce such economy as I considered advisable, and, at times, both Mr. P. C. H. Smart, who is in charge of the Drawing Office, and I have had to go to considerable trouble to get our views of a case accepted. The tendency is now, however, to frequently consult us, and thanks to this co-operation, no unnecessary work need be anticipated in the future.

An illustration of the importance of the remarks made above may emphasize them; it was found that to print the maps required for the administrative

report of one Department 10,000 pulls from a press were required; a similar result could have been obtained with 1,250 pulls. This reduction in work does not apply to the actual printing only, but also to several other phases of the reproduction process.

13. A great deal of trouble has been experienced in the year through the effect of the climate on the paper in which cadastral maps are printed; this paper, commonly referred to as Form P. 70A., seems to crack badly in its third or fourth year of life, and it is capable of such contraction, at any time, as may result in serious trouble both in area extraction and boundary comparison.

A considerable amount of attention has been paid to the question of a suitable paper for cadastral maps by the Revenue Surveyors of Egypt, and I am at present in communication with the Director of Surveys in Egypt on this subject. I hope shortly to submit a detailed note on this question to the Board and will embody in it, if it is received in time, such information as I am able to obtain from Egypt.

I consider that we should change the paper used with the least possible delay, and I believe that certain suggestions with regard to the method of printing of the Form P. 70A. made by the Settlement Officer of Jalpaiguri would result in greatly enhanced value to the areas of fields as obtained by acre-comb extraction.

14. During the year a considerable amount of attention has been paid to the question of how far it is possible to make an accurate 4-inch comparison between the boundaries of the old Revenue and *Diara* Surveys, and those as surveyed during modern Major-Settlements. I believe that under certain circumstances a very accurate comparison is possible and, at the request of the Settlement Officer of Faridpur, a serious attempt has been made to compare the old and modern boundaries in the Faridpur district. The work requires very close supervision, and I cannot say, at present, how far our results can be considered to be successful; if, as I hope, they are successful, we shall have taken a step which will be of very considerable value.

15. I find that, when there is pressure of work in a Traverse Section, our method of plotting 16″ traverse plots is not infallible. The plots are made from co-ordinates, and the direct distances between every two consecutive points is checked against the distance, to scale, *in the set up* as measured on the ground; this gives us one check; as a final check the distances all round a polygon are again tested by an independent agency.

It would be thought that mistakes could only occur very seldom with a rigid procedure such as that described, and yet, particularly in the Mymensingh district, where the pressure of work was great, an appreciable number of mistakes occurred.

In Egypt, for similar work, a plotting machine is used, but I understand that the machine is not on the market. It is held that it ensures absolute accuracy and that the outturn of one man with the machine is double of that of one man by our system. I am making enquiries about this instrument and will report on it to the Board of Revenue in due course.

16. With reference to the end of paragraph 3 of the Government Resolution on the Survey and Settlement Reports for last year (1907-08), I beg to report that at the Board's request I have compiled a detailed note on the question of boundary demarcation and that it is about to be submitted.

17. Towards the end of the field season the headquarters camp of Traverse Detachment No. I was totally destroyed by a storm; all records were, however, saved, but with difficulty.

18. I beg to draw the particular attention of the Board to paragraphs 6, 12, 14, 15, 17, 35, 41, 58, 59, 72, 76, 90 and 101 of this report.

CHAPTER II.

PART I.

REPORTS ON SURVEYS IN TEMPORARILY-SETTLED AND GOVERNMENT ESTATES UNDER SETTLEMENT OF RENTS AND REVENUE.

DIBRUGARH DISTRICT.

Traverse Survey.

19. The programme was in continuation of that of the previous year. Until April 1st, 1909, this section was under the control of the Director of Land Records, Mr. A. C. Bose, Extra Assistant Superintendent, being in executive charge. Owing to the very scattered nature of the programme, and to the uncertainty of its exact locality in some cases, the cost rates are very high. This must be expected, but it is my intention, in the future, to throw as much miscellaneous work as is possible on to this section of the Department; this procedure will have the effect of reducing to a minimum the incidence of supervision charges.

20. The theodolite stations, 2,371 in number, were marked as follows:— 2,041 with wooden pegs, 104 with earthen mounds containing *simul* trees, 76 with masonry pillars, and 150 with stone prisms.

21. The origin of survey is the intersection of North Latitude 26·30′ with East Longitude 94·30′.

22. The 16″ plots of the area dealt with fall on 135 sheets.

PART II.

REPORT ON THE SURVEYS IN PRIVATE ESTATES.

DISTRICT JALPAIGURI.

Traverse Survey.

23. The programme consisted of the marking of the trijunction points of jotes, taluks, tea gardens and forest blocks falling in the area east of the Torsa river, that area having been traversed in the survey year 1907-08. In addition to the embedding of stones, cuttings of *Simul* trees, or young plants of that tree, were placed 5 feet to the magnetic north of all traverse stations, and mounds of earth, on the Assam system, were heaped up around each tree.

24. The work was much more intricate than was anticipated since it was necessary to connect the stones embedded with the previous year's traverse work.

25. The detailed areas dealt with were as follows:—

	Sq. miles.
Tea lands	102
Forest „	340
Taluks	345
Total	787

In this area 7,527 trijunction stones were embedded and 16,320 mounds erected round trees planted by the staff. About 12 per cent. of this work was inspected by the European staff; the work was found to have been well and properly done.

26. Mr. Judd, who is in charge of this section of the Department, holds that the planting of trees by Government agency is not likely to have satisfactory or lasting results. During the season under report a large amount of duplicate work was carried out, because trees were uprooted and removed either by the inhabitants or by wild animals; in such cases as were brought to notice new trees were embedded.

It will be observed from paragraph 23 of my last report that I was doubtful of how far it would be advisable for trees to be planted during the traverse survey stage in Eastern Bengal districts, and I now think that unless the trees are planted willingly by the inhabitants, their maintenance is very doubtful. The Director of Land Records will be consulted on this point, since there is another aspect of it which may cause a change in the system now adopted.

At present no permanent marks are placed inside fields ; the result is that practically all trees embedded as keys to those marks will, in highly cultivated tracts, fall inside fields. A full-grown *Simul* tree will cover an area of, let us say, 20 by 20 yards (400 square yards), and *each* tree, in course of time, therefore, in highly cultivated areas, will seriously affect the cultivation of about one-tenth of an acre. Under these circumstances, it is hardly a matter for doubt whether *simul* trees will be popular or not with cultivators. These remarks refer to Eastern Bengal ; in Assam conditions are different.

27. The programme for the next survey year is the completion of the Jalpaiguri district and, since the work reported on here will be done *pari passu* with the ordinary traversing of the remaining untraversed area, no duplication of work need be anticipated in this district nor, for that matter, in any other district of the Province.

District Mymensingh.

Traverse Survey.

28. The survey of this district was continued from last year. In addition, in order to ascertain the exact extent of *diara* lands in the bed of the Jamuna river, a circuit marking the limits of the area was run across into the Rangpur and Bogra districts. As no detail work was done inside this *diara* area, credit is not taken for it in this report.

The lands of the Municipalities of Sherpur and Jamalpur were also traversed at the request of the Settlement Officer ; the 16″ plots of these areas were supplied to the Settlement Officer during the field season.

29. The actual areas traversed were :—

		Sq. miles.
Thana Nalitabari		274
„ Phulpur		400
„ Iswarganj		203
Total		877

30. The origin of the survey is the intersection of East Longitude 90·30′ with North Latitude 24·30′.

31. No Great Trigonometrical Stations were connected with, as none were available. The next year's programme brings some of these stations within a reasonable distance, and as soon as these are connected with, final corrections and co-ordinates can be applied to this year's work.

32. The marks embedded were as follows :—

2,853 stone prisms, 3 old *pucca* pillars, 527 cylinders and 13,005 wooden pegs.

In addition to these marks, a sapling of the "Gika" tree was planted 5 feet to the magnetic north of each mark on a village boundary. The original intention was to plant *simul* (cotton) trees, but these could not be obtained in sufficient quantities.

33. The mean magnetic variation is east 1·15′.

34. The traverse plots fall on 2,018 sheets.

35. Little or no preliminary demarcation was done by the inhabitants ; they are lazy by nature and habit, and the absence of demarcation does not necessarily imply that they are not interested in the work. It is satisfactory to note that, compared with last year, active obstruction, shown by the wilful removal of traverse marks, was seldom met with.

36. The maps of the Revenue Survey of 1849—1857 were used as guides and gave considerable help.

37. The health of the establishment was good ; only two men died during the field season.

38. The 16″ plots are practically completed and will be despatched to the Settlement Officer by the 15th October 1909.

39. A certain amount of arrears have accumulated in this detachment. They are the result of the reduction of my budget in this financial year, and so are unavoidable. I have taken steps to work off the arrears—none of which are of any real importance—with the least possible delay. Mr. C. A. O'Donel, who is in charge of the detachment, has had the utmost difficulty in keeping that part of his work on which the Settlement Department was dependent for the employment of its staff, up to date, and he and his native establishment are to be congratulated on the small amount of arrears that has accumulated.

Districts Faridpur, Pabna, Dacca and Tippera.
(Riverain Areas.)

Traverse Survey.

40. The object of this programme was to complete the traverse of the banks of, and islands in, the Padda and Ganges rivers where these rivers bordered on the north and east of the Faridpur district. This of course entailed the crossing over to the high bank on the opposite sides of the rivers to Faridpur and meant the traversing and cadastral survey of a considerable area falling in and around the beds of two of the largest rivers in the world.

The area for survey was greatly underestimated, and it turns out to be well over double of that expected. It was eventually completed, but at great inconvenience to the Settlement Officer and his staff, since the area was eventually found to be 654 square miles.

This area includes water, but my experience is that there is little or no difference between the time required to traverse survey an ordinary land covered surface of a definite area and that needed for a similar area which falls between the main banks of a large river; the reasons for this are (i) that much time is lost in trangulating distances, (ii) time is wasted in moving from point to point in boats instead of on foot.

The area covered is very much in excess of any similar area dealt with in one season since Bengal Surveys were first started, but, although it may be a matter for congratulation that the work was completed, I take this opportunity of pointing out that large *diara* programmes, with the establishments we use, are inadvisable.

41. I have several reasons for making the above statement, but will confine myself to one, which will, I think, be sufficient to prove my point.

The traverse work starts early in November and, with a programme of reasonable size, is completed in December; the 16″ plots are with the Settlement Officer by the middle of the following January. The Settlement Officer's field work continues until the end of April, and perhaps later.

From November to April the river is dropping steadily and day by day land surfaces appear; it is, however, during the last month of this period, that the rate of appearance of land surface reaches its maximum and it may be taken that the average rate of emergence during the latter stage is at least twice that of the earlier stage; from some years' experience of the large rivers of this Province and Bengal I compute that if there are 50 square miles of land surface in a river bed early in November of one year, these will probably have extended to over 100 square miles during the five ensuing months; of the excess area, about 25 square miles will appear, under normal conditions, during the six weeks following the 1st March.

In other words, it is probable that, however carefully the traverse is regulated, if a large *diara* area is taken up in one season, the detail surveyor will have to deal with a land area which is approximately 100 per cent. in excess of that actually traversed, and it is obvious that the greater the interval of time between the commencement of the traverse and the completion of the detail survey the less efficient does the former become as a help to the latter; the time interval is dependent on the size of the programme taken up, and I have no hesitation in saying that to keep the interval within reasonable limits the programme dealt with, assuming no great extension to the staff we work

with at present, should not exceed 250 square miles of land and water surface combined.

As already stated, there are other reasons which could be advanced which tend to show the advisability of restricting *diara* programmes, but that given by me will, I think, be admitted to be sufficient in itself.

42. The area was divided into three blocks, namely :—

(*a*) That area between districts Faridpur and Pabna, including a portion between Pabna and Dacca (205 square miles).

(*b*) The *diara* area between Faridpur and Dacca districts (204 square miles).

(*c*) The area between Faridpur and Tippera (245 square miles).

These areas include water which covered about 42 per cent. of the 654 square miles dealt with.

I have not attempted to give area figure by districts, since my figures cannot agree with those of the Settlement Officer; the necessary adjustment will be made in due course in my apportionment statements.

This adjustment will entail some alteration in the figures of Appendix I, Part B, which will be made in my next report.

43. The origin adopted for this survey was the intersection of North Latitude 23·30′ with East Longitude 90·00′, which is the origin used hitherto for the Faridpur district.

44. The mean magnetic variation is East 1°.

45. The work falls upon 760 sixteen-inch sheets, all of which were despatched to the Settlement Officer during the field season. For obvious reasons, however, a number of these sheets were despatched very late in the season; this was unavoidable, and the delay caused the Settlement Officer and his staff great inconvenience.

46. No Great Trigonometrical connections could be made, but as the work along the whole length of the west of the Dacca district was connected with old traverses properly connected with Great Trigonometrical work, no harm will result.

47. The old Revenue Survey maps were used as guides to the field staff, but owing to the enormous changes which the river beds have undergone in recent years, those maps were of little or no use to us.

48. No demarcation was done by the inhabitants, nor could any have been expected. The health of the establishment was good and only one man (a traverser) died.

49. There are no arrears of work remaining in this area except the copying of the traverse data for Settlement Officer. The question of reducing the amount of copying is before the Board of Revenue, and as soon as it is settled, the copying work will be taken in hand.

District Dacca (Uplands).

Traverse Survey.

50. The programme in this district consisted of relaying 800 square miles of area traversed before the cadastral survey of this district was first postponed. The work was started in the middle of January 1909, but after 50 square miles had been dealt with, the programme was abandoned, because the detail survey of this district was again postponed owing to the curtailment of the Survey and Settlement budgets for the financial year 1909-10.

The work will be proceeded with in the coming cold weather.

Part III.

REPORT ON MISCELLANEOUS SURVEYS.

Goalpara-Kamrup District Boundary.

Relaying Work.

51. The Goalpara-Kamrup district boundary touching on portions of parganas Habraghat and Khuntaghat of district Goalpara, for a distance for about 60 miles, was required to be relayed for private persons; the relaying started from a point about 6 miles from the trijunction of districts Goalpara, Kamrup and the Garo Hills and joined on to a boundary survey of Mr. C. A. O'Donel (1903-04); the basis of relaying was Major Macdonald's survey of 1873-74.

In addition we were required to relay from Mr. Kelso's maps of 1849—53, so that a decision may be come to as to which boundary is to be accepted; when this point is settled, permanent demarcation is to be carried out by the district staff.

52. It became necessary first to obtain Mr. Kelso's and Major Macdonald's maps and data; these were obtained without delay, and the preparation of a case map commenced.

Major Macdonald's traverse work of district Goalpara had been connected with a number of Great Trigonometrical Stations in the district, his work being referred to Great Trigonometrical Station Bunkimari as origin; it was consequently easy to convert the values of his traverse stations and refer them to the intersection of North Latitude 26° 30′, East Longitude 90° 30′, which has been taken as the origin for the traversing done during the season.

The data was converted and plotted on the 4-inch scale; on these plots the district boundary, as shown in Macdonald's original maps, was easily transferred.

Now Kelso's line had to be shown on these same sheets, but it was found that his traverse survey was not made with reference to any geographical origin; neither had any connections been made with Great Trigonometrical work, although, in one of his maps, he has given the co-ordinates of one of his traverse stations ("Y^8") from Brahmaputra River Great Trigonometrical Station to be No. 1391·40E 392·00; it is, however, practically certain that these co-ordinates were simply recorded by compass measurements made from his maps and that his figures are incorrect; a reduction of Major Macdonald's original maps (which are on the 2″ inch=1 mile scale) was made to half scale (which is the scale on which Kelso's map was originally surveyed), and when a trace of Kelso's map of the whole of parganas Habraghat-Khuntaghat boundaries was fitted over the reduction, it was found that there were many common points in the two boundaries; but if Kelso's lines be transferred by this means to the plotted sheets of the case map and traverse stations which fall on the boundary checked by co-ordinates run down with the origin value of Y^8 as given by him, the traverse stations fall off the boundary as transferred by common details.

Again, although as I have mentioned that Macdonald's and Kelso's maps agree well in places in details if Kelso's values are connected to the origin (accepting the value of station Y^8 as given by him) and if his traverse data be used, the whole of the boundaries of both parganas become distorted when compared with Major Macdonald's survey.

Latitude ... 26° 30′
Longitude ... 90° 30′

For the reasons given above, Kelso's traverse data had to be completely set aside and the case map has been completed by reducing Macdonald's survey of the parganas Habraghat and Khuntaghat boundaries to the 1 inch=1 mile scale, and fitting on Kelso's survey of the boundaries of these parganas by common details; a comparative map on the 1 inch=1 mile scale was thus obtained; from this map Kelso's line has again been transferred by pentagraph

and compass to the plotted sheets of Major Macdonald's survey referred to above.

In the case map for relaying which has thus been obtained, Major Macdonald's line is, as far as is possible, mathematically correct, but although every endeavour has been made to fix Kelso's boundaries absolutely accurately, such is not possible and his line may be anything from 1 to 10 chain out of position; closer accuracy cannot be obtained.

53. A trace of the case map was made over to a traverser who, with a squad of 3 tindals, 2 mates and 10 khalasis, proceeded to work on the 2nd January 1909.

The traverser was instructed to start a traverse from Great Trignometrical Station, Gorkhar, pick up pillar No. 1 which is near the trijunction of Goalpara, Kamrup districts with the Garo Hills and to proceed along the Goalpara-Kamrup district boundary, following the trace supplied him, and connecting with all pillars and other permanent marks which he came across; he also connected with several Great Trigonometrical Stations which fell near the boundary; after proceeding the required distance to be relaye he was ordered to leave the supposed boundary and connect his traverse with Nirikhola Great Trigonometrical Station, which was the closest Great Trigonometrical Station to that point.

The traverser experienced great difficulties in places; the jungle was very heavy and a great deal of line-cleaning had to be done and, as the country near the Brahmaputra and other rivers has changed a great deal, the map sometimes gave little help.

54. The traversing of the boundary was completed on the 26th April 1909.

146·30 linear miles of traversing has been done and 402 angular observations made.

Seventeen Azimuths were observed and 14 used.

55. Six Great Trigonometrical Stations were connected with and their values have been used in reducing the origin co-ordinates of the traversing.

56. Work had to be closed on the 26th April 1909 owing to storms and rain which prevented further progress; the relaying of the boundaries could not be completed, but will be finished this cold weather.

57. The traverse computation were kept up to date and the "sets up" are complete. The traversing done during the season has been plotted on the case map which is now completely ready for the final relaying of whichever boundary will be accepted.

58. One matter remains to be decided in connection with this work; the Assistant Superintendent of the Bijni Raj (one of the parties interested in this work) holds that the northern bank of the Brahmaputra is the district boundary along pargana Habraghat by Kelso's map; but it appeared that this was not the case, and a reference was made to the Deputy Commissioner, Goalpara, and both the Deputy Commissioners, Goalpara and Kamrup, are of opinion that the northern bank is not the district boundary; it is stated that Government instructions are required on this point. The question has been sent to the Commissioner for final orders.

59. Forty-one permanent marks of Mr. C. O'Donel's survey of 1903-04 marking Major Macdonald's boundary were picked up by traverse during the season, and on these being plotted from the values which have now been assigned to them, on the case map, 21 are slightly off the boundary (out of these, 14 are from 1 to 3 chains off the line and 7 differ by a few links); the remaining 20 are directly on the line and go to show that both the map that has now been prepared and the relaying done previously are correct. I am unable to account for some marks falling off Major Macdonald's line, but it may be fairly assumed that some errors occurred in the placing of marks originally; it is possible that the permanent marks were embedded some time after the actual survey work.

60. This survey is one which is very typical of a large amount of relaying work which will have to be done in the province in the next few years, and I think that a perusal of the report above will convince every body that no work of this nature should be left in the hands of any but professional surveyors.

Redemarcation of the Jalpaiguri-Bhutan Boundary.

61. This survey was referred to in paragraph 52 of my last report. I proposed to give no detailed report until the work was finally completed, and I then expected that no work would have to be done after the end of this survey year. It so happened, however, that the Jalpaiguri district at the end of the cold weather of 1908-09 was subjected to a series of violent storms which totally destroyed the headquarters camp of Traverse Detachment No. 1 and which rendered work in the field very difficult; to add to this in the hills in which the greater part of the boundary to be redemarcated falls, an unusually early, heavy and steady rainfall occurred, and I very reluctantly gave orders that the field staff should be recalled before the work was finally completed.

Very little now remains to be done, and a detailed report on the whole boundary will be published in due course.

The work has, at times, been one which entailed much exposure to the establishment, but the exposure has been borne as uncomplainingly, and I am convinced that if I had insisted on the work being continued in spite of storm and rain, considerable loss of life would have occurred. Mr. P. F. Delaney, who was on the boundary for several months, was in a deplorably run down condition when he returned and it took him several months to recover his health. I am glad to be able to testify to the pluck with which he continued his labours under very trying circumstances.

Redemarcation of the Goalpara-Garo Hills Boundary.

62. This work was in continuation of that done last year; it was carried out under the Director of Land Records' orders. The boundary has been demarcated according to Major Macdonald's survey of 1873-74, and on the completion of the survey work, the Deputy Commissioners of the two districts went over the whole boundary and marked it finally. There are a few points in connection with this work which remain to be cleared up, and I am in communication with the Commissioner of the Assam Valley Districts regarding them.

District Sylhet.

Traverse Survey.

63. At the request of the Director of Land Records the traverse survey of a number of scattered blocks of estates was undertaken. It was hoped that sufficient Great Trigonometrical connections could be made to admit of the geographical positions of the blocks being fixed; the blocks, however, averaged so small in area, and were so scattered that the attempt to fix their geographical positions failed, since success would have entailed exorbitant expenditure. I am in communication with the Director of Land Records on the whole subject of the traversing of scattered estates and a report will be submitted to the Board in due course.

64. In all 160 traverse polygons were surveyed; their combined area was just under 8·5 square miles; the average area of the blocks was therefore about 34 acres.

65. A large number of blocks still remain to be surveyed, but work is held up until the Director of Land Records and I have arrived at an economical method of dealing with it.

District Chittagong.

Traverse and Detail Survey.

66. The programme dealt with was:—

(*a*) a detail survey on the 32″ scale of ·88 square mile of hills to the north of the Chittagong Municipality;

(*b*) a similar survey of about ·8 square miles at Cox's Bazar; and

(*c*) a test survey of about ·02 square mile of the Municipality.

The two former were required to be topographically surveyed—contours being run at vertical intervals of 15 feet; the object in each case was to provide maps from which possible sites for buildings and the alignment of roads to lead to them could be ascertained. The last-mentioned work was a partial resurvey of the Municipality of which the maps prepared in 1891—1893 were considered to be incorrect; it was carried out with a view to ascertain whether a resurvey of the whole Municipality would be necessary or not.

67. All the maps and records have been forwarded to the district authorities.

District Rajshahi.

Traverse Survey.

68. Nine villages and three small estates were traversed for cadastral survey by the District staff, at the request of the Director of Land Records. The 16″ sheets and a copy of the traverse data were sent to the Collector during the field season; in all there were 24 traverse plots.

69. The area comprised 15·15 square miles and, when possible, the work was connected with the main triangulation.

70. The origin adopted was the intersection of North Latitude 24·30′ with East Longitude 88·30′.

71. Two hundred and forty-one station marks were embedded, and 8 Azimuths observed.

72. Eighty-seven linear miles of chaining were run.

73. With the exception of technical orders, all orders to the traverser employed on this work were issued by the Collector. In many ways this arrangement is inadvisable, but cases must occur in which it has to be resorted to. I am by no means certain how far such an arrangement was necessary in this case.

District Rajshahi.

Narod River Dispute Case.

74. Between the village of Kanaikhali and Bhutua, along the Narod river, in district Rajshahi, a dispute existed between Rani Hemangani Debi (and other executors of the estate of the late Raja Jogindra Nath Roy) and Government; the Rani stated that certain pieces of land on the north bank of the river, occupied by Government, belonged to the estate, and it was decided to survey the disputed land by professional agency.

It was required to relay the common boundary of the two villages by the old Revenue Survey map and to prepare a case map (scale 4 inches=1 mile) showing this line and the Narod river as it existed at the time of survey.

75. The traverser was given a trace of the Revenue Survey map of 1850-51 (being a congregated village plan showing these villages and those adjoining) and he was instructed to hunt up all the trijunctions shown therein to see whether any of the old station marks could be found; but although a very careful search was made, none could be found. The finding of any such marks would have helped towards the relaying being completed rapidly.

76. As no old station marks could be found, it became necessary to traverse both the villages Kanaikhali and Bhutua all round and on the plot of the traverse polygon so obtained to survey the village boundaries as they exist now so as to obtain common points, *i.e.*, details by which the Revenue Survey maps could be fitted on to, and the required boundary transferred to, the plot from which relaying could be done.

To do this, 17 linear miles of traversing were done, 167 station marks being embedded and 3 Azimuths observed and used.

77. A 4-inch=1 mile plot of this traverse was supplied the traverser, and he then surveyed the northern, eastern and western boundaries of Kanaikhali and the southern, eastern and western boundaries of Bhutua, as they were pointed out by responsible persons; he also surveyed both banks of the Narod river as they existed at this time. This survey, as soon as completed, was sent into the Camp Office, and by fitting over it a trace of the Revenue Survey map it was found that many points, three trijunctions and other details agreed with the Revenue Survey map; with the aid of the common points so obtained, the Narod river was transferred from the Revenue Survey map and a comparative map resulted by which the required relaying could be done.

This map was then sent out to the traverser and he relayed the southern bank of the river as it existed in 1850-51.

78. The Collector required further information which was supplied him. Later on a demand was made for all responsible persons connected with this survey to attend at the Collector's Court as witness to depose to the accuracy of the case map and relaying. I should like to point out that to meet a similar demand in every case, in which a case map is made, would entail very great inconvenience to me, my officers and my staff. I am approaching the Board separately on this subject.

79. The total area disputed was 2·80 acres; the area of disputed area outside Kanaikhali being 1·36 acres and that inside Kanaikhali 1·44 acres.

80. No Great Trigonometrical Stations being within a reasonable distance, connections could not be made.

District Tippera.

81. At the Director of Land Records' request eleven villages were traversed for cadastral survey by the District staff.

82. The area covered was 5·2 square miles and the traverse plots were sent to the Collector.

District Pabna.

83. Such portion of the Balarampur Government estate boundary as falls in the bed of the Ganges was relaid, at the request of the Collector, according to the old Revenue Survey maps.

District Bakarganj.

84. At the Settlement Officer's request 13 square miles of river bed "churs" were traversed. The plots were sent to the Settlement Officer during the field season.

Khasi and Jaintia Hills.

85. Topographical surveys of the two Government Farms, near Shillong, were made for the Director of Agriculture. The maps made will be useful for working plans on the farms and also for Annual Report index purposes. It is possible that similar surveys will be carried out for all the Government Farms in the province.

Part IV.

REPORT ON DRAWING OFFICE WORK.

86. As explained in paragraph 5 of this report, the work dealt with falls under three heads :—

(*a*) That done in the Assam Reproduction Office at Shillong prior to 1st April 1909;

(*b*) that dealt with in the Bengal Drawing Office prior to the partition of Bengal Surveys ;

(*c*) that completed in the new Shillong Drawing Office since it opened at Shillong on April 1st, 1909.

I have not attempted to separate the details of these three different phases of the Drawing Office work, since no good purpose would be served thereby.

STANDARD MAPPING.

87. It was thought best, since the Surveyor General has not yet decided how far it may be advisable to start a Standard Mapping Section in the Shillong Drawing Office, that such portions of Standard Mapping as were actually in hand on 1st April 1909 should be finally dealt with in the Bengal Drawing Office.

The outturn for the year is the completion of and the sending for publication of sheets Nos. $79\frac{K}{1\&5}$ and $79\frac{F}{16}$ (Khulna, Sundarbans and Bakarganj), in addition sheet No. $79\frac{F}{15}$ is nearly complete and will be sent to the Surveyor-General by the Director of Surveys, Bengal, in due course.

88. Index maps were prepared for the following districts :—

Faridpur, Dacca, Mymensingh, Jalpaiguri, Sylhet, Chittagong, Tippera, Pabna, Rajshahi, Kamrup and Goalpara.

A wall map of the Gauhati town (scale 8″=1 mile) was also prepared.

TRAVERSE CHARTS.

89. The Traverse charts of standard sheets Nos. $79\frac{N}{9,10,14\&15}$ of Chittagong district were sent for publication, and that for sheet No. $79\frac{N}{14}$ will shortly be despatched from the Bengal Drawing Office.

TRIJUNCTION MARK MAPS.

90. These maps have been made for the following thanas of district Tippera :—Laksam, Kasba, Chandagaon, Nobinagar, and Brahmanbaria. The necessary number of copies were printed in the Reproduction Section and supplied to the Collector of Tippera.

THANA MAPS.

91. The question of how these maps are best prepared is in abeyance and none were prepared during the year. Hitherto the maps have been prepared by the Settlement Officers concerned, but it is possible that the formation of a Standard Mapping Section in the Shillong Drawing Office will entail a modified procedure. I have dealt with this matter in my proposals for the future of Standard Mapping in this province (*vide* paragraph 7 of this report), and as stated there, it is expected that orders on those proposals will be issued shortly. In the meantime since we have no data from which we can compile these maps, no harm is done by awaiting orders on their future. We may expect a considerable amount of material during the next twelve months, and, as it becomes available, Thana maps will be prepared.

MAP REPRODUCTION SECTION.

92. In 1907-08, 171,788 copies of maps were supplied. During this year 1,23,195 copies were printed. This falling off is very significant and requires explanation. The basis of organization of the Shillong Drawing Office is the production of 400,000 maps in a year, but this year it so happens that the in-fall of cadastral sheets is far below its normal ; this is mainly due to—

(*a*) the Assam requirements being low ;

(*b*) the Eastern Bengal requirements being great ;

but, owing to the Jalpaiguri and Mymensingh settlements being in their infancy, no sheets of them are as yet ready for reproduction ; as regards Bakarganj, the reproduction programme in that district is completed, and in Faridpur, demands are only just beginning to come in.

Looking ahead it will be seen that an enormous demand will be thrown on the Reproduction Section about six months hence; the three major settlements will each begin to feed this office, and there is every chance of one or more of them being delayed in their recovery operations if a regular programme for reproduction cannot be laid down.

It is quite clear that an office designed to carry out a definite programme in twelve months cannot be expected to cope with the whole of that programme in, say, half that period.

I have drawn the attention of the Director of Land Records to the very great importance and urgency of this matter, and he will doubtless arrange for a steady programme in the future.

It has been found that direct reproduction from the original 16″ sheets in Eastern Bengal is not, at the present moment, a success. I believe that the failure is more due to deficiencies in the quality of the paper that we use than to anything else, and I have hopes of introducing a new paper which will not split or crack as that which we now use does in the very damp climate of Eastern Bengal.

I think that very careful consideration should be given to the subject of the paper we use before it is decided that direct reproduction is impossible. Direct reproduction is successful in Bengal, and, despite the difference of climatic conditions, I do not at present admit that it cannot be made a success in Eastern Bengal and Assam.

93. The statement below gives details of cadastral maps printed for the Settlement Department:—

District.	Number of villages.	Number of sheets.	Copies printed.	Remarks.
Kamrup	...	...	1,040	This work was done in Shillong prior to 1st April 1909. Further details are not available.
Darrang	...	...	4,350	
Lakhimpur	...	...	2,200	
Nowgong	...	...	5,510	
Rangpur	...	...	2,250	
Chittagong	45	98	686	Work done in the Shillong Drawing Office from 1st April 1909 to the end of the year.
Nowgong	672	788	22,290	
Darrang	741	793	18,720	
Sibsagar	191	223	6,690	
Kamrup	14	14	420	
Noakhali	5	23	3,223	
Dacca	1	1	30	
Tippera	1	1	30	
Bakarganj	45	68	577	
Faridpur	13	30	80	
Mymensingh	10	10	600	
Chittagong	...	67	670	Work done in the Bengal Drawing Office prior to 1st April 1909.
Bakarganj	...	70	3,500	
Total ...	...	...	72,866	Maps.

94. For departments other than the Settlement Department, 50,329 maps were printed and supplied.

95. The outturn of the old Assam Vandyke Office for the first six months of the year was, in all, 30,250 copies of maps, the outturn for the last six months of the year was 86,121 copies of maps, but had a larger settlement programme been forthcoming, this amount could have been largely increased.

96. During the year the Public Works Department constructed a building for this section, and the excess plant ordered from England, together with that now in use, will be installed in this office as soon as the former arrives in Shillong.

Badar Section.

97. During the year the Badars of 5 villages of Bakarganj and 21 villages of Chittagong were received and the necessary corrections were made on the original maps. In addition, this section examined the maps of 112 villages (250 sheets) of district Chittagong, and touched up for reproduction 23 original sheets and 334 traces of village maps of districts of Sibsagar, Darrang and Noakhali.

Map Records Section.

98. All the sheets of Eastern Bengal districts, which, until the formation of this Department, were lodged in the Bengal Drawing Office, were taken over during the year. These sheets are as follows:—

16″ sheets	14, 457 sheets.
32″ „	4 „
64″ „	3 „
4″ „	115 „
Total . .	14,579 „

During the year the Collector of Chittagong lodged 133 sixteen-inch maps, 34 thirty-two-inch maps and 1 sixty-four-inch sheet.

These have not yet been racked, as the fire-proof racks are not yet installed in the record-room.

99. During the period under report a fire-proof record-room was constructed by the Public Works Department, but it was not completed until the end of September 1909. As soon as the building was handed over, the installing of the racks was commenced, and it is expected that by the end of December 1909 those sheets of the province which are in my hands will be arranged in the racks.

CHAPTER III.

Part I.

Tours of the Superintendent of Provincial Surveys.

100. I have been in the field and on tour for a little over seven months of the year under report. I was, however, compelled to abandon my rains tour because of a tonga accident in which I was injured on July 9th, 1909.

I inspected all the cadastral work of the three major settlements of Eastern Bengal, and also visited Dibrugarh, Jalpaiguri and Mymensingh settlements during the hot weather. I also have inspected all the Traverse Sections and the Drawing Office frequently.

Part II.

Services of Officers.

Captain V. R. Cotter, I.A., Assistant Superintendent, Survey of India, joined the Department on its formation.

101. During the year No. 6 Party of the Survey of India was broken up by Mr. A. W. Smart. As usual, Mr. Smart's work was exceedingly well and carefully done, and I commend his service to the notice of the Board.

Mr. L. F. Berkeley and Mr. P. C. H. Smart have jointly controlled the Drawing Office work and both have helped me very greatly.

Amongst the Executive Traverse Officers Messrs. C. A. O'Donel and O. E. C. Judd have done excellent work, but Mr. A. C. Bose, who was in charge of the Assam Traverse Section, worked unsatisfactorily. He has been replaced by Mr. P. F. Delaney, who is a conscientious and hardworking officer.

The other officers have all worked well.

102. Amongst the Indian establishments I specially commend Babu Lalji Sahai, my Head Clerk, Babu Damodar Rao, my Head Accountant, and Pundits Kundar Lal and Mayadhari, Surveyors. All these have done excellent work during the year.

I have the honour to be,

SIR,

Your most obedient Servant,

F. C. HIRST, *Captain, I.A.*,

Superintendent of Provincial Surveys,
Eastern Bengal and Assam.

APPENDIX I.

PART A.

Summary of outturn of work of Survey Sections in Eastern Bengal and Assam for 1908-09.

District.	Traversing.				
	Number of villages.	Linear miles of chaining.	Number of stations at which the theodolite was set up.	Number of Azimuths.	Number of sub-traverses.
1	2	3	4	5	6
Mymensingh	1,394	3,612	20,848	117	848
Faridpur, Dacca, Pabna and Tippera.	435	1,676	9,355	43	453
Dibrugarh	123 (*a*)	296	2,371	21	...

(*a*) Includes 18 waste land tea grants.

NOTE.—Petty surveys are excluded from this table.

F. C. HIRST, *Captain, I.A.,*
Superintendent of Provincial Surveys.

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APPENDIX I.

PART B.

Statement of Outturn and Cost rates.

District and estate.	Description of work.	Estimated area to be dealt with, in square miles.	Year of inception of operations.	Area surveyed, in square miles.		Cost rate per square mile.		Balance of area remaining to be surveyed.	Estimated cost of completing the area in column 9.	Estimated final cost rate per square mile.	Remarks. (Explanation of unusually high expenditure.)
				During the year under report.	Total including previous year.	During the year under report.	From beginning to end of year under report.				
1	2	3	4	5	6	7	8	9	10	11	12
									Rs.		
Jalpaiguri	Traverse	3,800	1905	787 (1)	3,200	82·2	53·5	600	32,100	53·5	
Mymensingh	Ditto	6,332	1907	877	1,753	49·0	52·6	4,579	2,40,855	52·6	
Faridpur, Dacca, Pabna and Tippera (*Diara* areas) ...	Ditto	654	1908	654	654	47·9	47·9	*Nil*	...	...	
Dacca	Ditto	2,782	1905	50 (2)	50	98·9	98·9	2,732	1,50,260	55·0	The cost rate is high, as traversers were recalled from their areas soon after commencement of work owing to curtailment of budget allotment.
Dibrugarh	Ditto	280	1907	64	165	...	...	...	...	...	
Total ...	...	13,848	...	2,432	5,822	...	...	...	...	...	

(1) Marking old traverse stations, etc.
(2) Relaying work.

NOTE.—(*a*) The Dibrugarh traverse work was taken over from the Director of Land Records on 1st April 1909. The figure in column 6 of 165 square miles is approximate, and the cost rates are not available, nor can any estimate of the remaining area be made.

(*b*) The area of Jalpaiguri district is 2,962 square miles. The 787 square miles shown in column 5 were traversed in 1907-08 and relaid during the year under report.

F. C. HIRST, *Captain I.A.*,
Superintendent of Provincial Surveys, Eastern Bengal and Assam.

APPENDIX II.

Statement of sums expended for the year ending 30th September 1909.

District, etc.	Description of work.	Expenditure incurred during the year under report.				Total expenditure from inception to end of the year under report.				Remarks.
		Actual (direct charge).	Share of Superintendent of Provincial Survey's pay and office.	4 per cent. charge for instruments.	Total.	Actual (direct charge).	Share of Superintendent of Provincial Survey's pay and office.	4 per cent. charge for instruments.	Total.	
1	2	3	4	5	6	7	8	9	10	11
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Jalpaiguri (Government estate) ...	Traverse	53,304	9,968	1,459	64,731	1,48,547	17,147	5,557	1,71,251	
Jalpaiguri-Bhutan boundary ...	Ditto	4,219	790	...	5,009	11,747	1,452	...	13,199	
Sylhet (Government Estate) ...	Ditto	3,163	593	93	3,849	3,163	593	93	3,849	
Rajshahi (Ditto) ...	Ditto	349	64	16	429	349	64	16	429	
Ditto Narod river dispute ...	Ditto	831	158	25	1,014	831	158	25	1,014	
Ditto Nirmal Chur, &c. ...	Ditto	351	64	14	429	351	64	14	429	
Chittagong (Government estate)	Ditto	400	74	11	485	400	74	11	485	
Faridpur	Ditto	1,197	226	32	1,455	1,01,002	5,296	4,227	1,10,525	
Shillong Town Survey ...	Ditto	485	91	...	576	485	91	...	576	
Mymensingh	Ditto	35,427	3,616	966	43,009	78,868	10,433	2,856	92,157	
Kamrup and Goalpara boundary relaying, parganas Habraghat and Khuntaghat.	Ditto	1,033	193	34	1,260	1,033	193	34	1,260	
Kamrup—Bijni dispute ...	Ditto	285	54	13	352	285	54	13	352	
Dacca—Relaying	Ditto	4,032	754	162	4,948	4,032	754	162	4,948	
Faridpur and Pabna Diaras ...	Ditto	7,963	1,484	261	9,708	7,963	1,484	261	9,708	
Ditto Dacca ditto ...	Ditto	7,754	1,452	194	9,400	7,754	1,452	194	9,400	

Statement of sums expended for the year ending 30th September 1909—concluded.

District, etc.	Description of work.	Expenditure incurred during the year under report.				Total expenditure from inception to end of the year under report.				Remarks.
		Actual (direct charge).	Share of Superintendent of Provincial Survey's pay and his office.	4 per cent. charge for instruments.	Total.	Actual (direct charge).	Share of Superintendent of Provincial Survey's pay and his office.	4 per cent. charge for instruments.	Total.	
1	2	3	4	5	6	7	8	9	10	11
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Faridpur and Tippera Diaras ...	Traverse	10,051	1,880	342	12,273	10,051	1,880	342	12,273	
Tippera	Ditto	580	110	5	695	580	110	5	695	
Bakarganj—Megna chur ...	Ditto	568	107	5	680	568	107	5	680	
Shillong Fruit garden ...	Ditto	108	20	...	128	108	20	...	128	
Shillong Farm	Ditto	202	38	...	240	202	38	...	240	(*a*) Figures supplied by Superintendent, Secretariat Press.
	Vandyke Office ...	4,139 (*a*)	... (*b*)	...	4,139	4,139	...	...	4,139	
	Standard mapping ...	4,133	1,016	...	5,149	31,476	2,705	...	34,181	(*b*) Cost of Control not applied for, as the office was a part of the Secretariat Press.
	Traverse charts ...	927	233	...	1,160	927	233	...	1,160	
Eastern Bengal and Assam Drawing Office.	Badars	1,775	439	...	2,214	4,148	585	27	4,760	
	Reproduction for sales, etc., districts Bakarganj, Chittagong and Bogra, etc.	22,157	5,477	...	27,634	52,530	7,651	...	60,181	
	Thana Trijunction Mark maps.	3,423	846	...	4,269	4,577	962	...	5,539	
	Index Maps for Survey Annual Reports.	224	55	...	279	224	55	...	279	
	Map records ...	11,492	2,835	...	14,327	13,488	2,989	...	16,477	(*c*) Share of control calculated from 1st April 1909.
Lakhimpur	Traverse	21,526	2,216 (*c*)	...	23,742	21,526	2,216	...	23,742	
Goalpara and Garo Hills boundary	Ditto ...	816	209 (*c*)	...	1,025	816	209	...	1,025	
	Total ...	2,02,914	38,062	3,632	2,44,608	5,12,170	59,069	13,842	5,85,081	

NOTE.—Charge for instruments calculated up to 31st March 1909, *vide* Government of India No. 800—58-4 Revenue and Agriculture, dated the 13th July 1909.

DATED SHILLONG:
The 23rd November / 7th December 1909.

V. R. COTTER, *Captain, I.A.*,
Offg. Superintendent of Provincial Surveys, Eastern Bengal and Assam.

No. 122—320.

FROM

F. P. DIXON, ESQ., I.C.S.,
OFFG. DIRECTOR OF LAND RECORDS,
EASTERN BENGAL AND ASSAM,

To

THE SECRETARY TO THE BOARD OF REVENUE,
EASTERN BENGAL AND ASSAM.

Dacca, the 23rd December 1909.

SIR,

I HAVE the honour to submit a report on the working of the Department of Land Records, in Eastern Bengal and Assam, during the settlement year which ended on the 30th September 1909. This report is divided into two parts. The first part gives an account of the year's work in the different districts. The second part deals with general topics.

PART I.

THE YEAR'S WORK.

2. In Appendix A will be found a general statement of the progress in survey and record-writing throughout the province.

3. In Eastern Bengal the three Survey and Settlement Parties, manned by special officers and financed from Imperial sources, have continued to work in the four districts of Bakarganj, Faridpur, Jalpaiguri and Mymensingh. In the districts of Bogra, Dinajpur, Malda, Noakhali, Pabna and Rajshahi operations on a smaller scale were carried on under the supervision of the District Officers. Details of the year's work in Eastern Bengal will be found in Appendices B, C and D.

4. In Bakarganj, which with Faridpur occupied the first Settlement Party, the work has been practically completed, and the Settlement Officer is now engaged in winding up the proceedings and in preparing the Settlement Report. The work to be done during the year comprised (1) the disposal of 15,267 cases under section 105 of the Tenancy Act and of 7,302 cases under section 106, (2) the recovery of survey and settlement costs, amounting to Rs. 3,14,268, (3) the land revenue settlement of 118 Government and temporarily-settled private estates containing 19,234 tenancies. In addition to this, 31 Government estates and temporarily-settled private estates were notified for settlement during the year and, as some of these estates had been excluded from the district operations, 68 square miles have had to be retraversed and 51 square miles cadastrally surveyed. In the cases under section 105 disposals up to 30th September amounted to 13,875 and in the cases under section 106 disposals amounted to 7,135. The outstanding work under both sections has since been practically finished. Recoveries of costs up to the 30th September amounted to Rs. 1,95,016; a further sum of Rs. 24,000 has since been recovered, the balance, which is all under certificate, is for the most part due from absentee landlords or in very small sums from raiyats, and to this is due the fact that the work of recovery has been both expensive and slow.

Three jamabandi camps were at work during the year, one in the Sundarban mahals, one in the 31 recently-notified estates of the Bhola subdivision and one in the other estates throughout the district; in all of these good progress has been made and the result of completed cases shows an average increase over previous revenue of 37 per cent.

The total expenditure of the year amounts to Rs. 1,76,858 which is distributed as follows:—

	Rs.	Cost per square mile. Rs.	
Traverse	795	...	
Cadastral	3,030	59	The area concerned was small.
Khanapuri	7,460	143	
Attestation	6,856	...	
Office work	28,817	...	
Sections 105 and 106 cases	48,650	...	
Section 104 cases	21,748	...	
Supervision	27,658	...	
Contingencies	17,675	...	
Recovery	14,170	...	
Total ...	1,76,858		

Against the heavy cost of recovery which included the preparation of certificates is to be set a receipt from stamps, etc., of Rs. 7,148. Other stamps receipts amounted to Rs. 26,955.

5. In Faridpur the cadastral survey, khanapuri and bujharat of the remaining 724 square miles of the district were completed. In addition to this, 358 square miles of the opposite banks of the Padma, Meghna and Ariel Khan rivers, which were to be surveyed under Government Notification No. 325R., dated the 9th February 1909, up to a limit of five miles from the main stream, were cadastrally surveyed, khanapuri being completed in 327 square miles and bujharat in 152 square miles. The work done was very thorough and successful.

Attestation of 838 square miles was completed: as during the recess most of the officers of the first party were employed in clearing off case work in Bakarganj, little progress was made in Faridpur in the disposing of objections under section 103A, but the arrears are not heavy. Orders on the printing schemes were not obtained in time to permit of any attempt to prepare the final copy of the record.

The total cost of the year has been Rs. 4,25,197 distributed as follows:—

	Rs.	Cost per square mile. Rs.
Cadastral	1,04,946	97
Khanapuri	49,972	47
Attestation	1,38,242	...
Office work	30,584	...
Case work under section 103A	9,325	...
Supervision	48,811	...
Contingencies	43,317	...
Total ...	4,25,197	

6. In Jalpaiguri 700 square miles were cadastrally surveyed during the year, and of these, 480 were khanapuried, the remaining 220 square miles covering tea grants and reserved forests. Bujharat was completed in 969 square miles out of the 1,000, which formed the season's programme, the balance remaining undone on account of mistakes in traverse which had to be corrected. The attestation programme of 50,000 interests was completed and records published in draft. Out of 5,690 objections under section 130A disposals amounted to 1,739.

Four questions of importance with regard to this settlement have been referred to the Board of Revenue during the year—(*a*) the status of the *adhiars*, (*b*) the terms of new leases in the Duars, (*c*) the fixation of rents of *chukanidars*, and (*d*) the Cooch Behar boundary.

The total expenditure during the year was Rs. 2,81,175 distributed as follows :—

	Rs.	Cost per square mile. Rs.
Cadastral	60,991	87
Khanapuri	7,575	18
Attestation	1,01,707	...
Office work and final publication	23,792	...
Case work under section 103A	2,972	...
Ditto section 104	19,954	...
Supervision	38,292	...
Contingencies	25,892	...
Total ...	2,81,175	

7. In Mymensingh traverse and cadastral survey and khanapuri were completed in 847 square miles and bujharat in 830 square miles. Attestation was done in 3 square miles only out of the 24 of the programme: the whole of this area lies in the Patiladaha estate, and in view of the questions which have arisen in connection with the estate it is as well that the programme was not entirely carried out. In this settlement 400 locally recruited and trained patwaris have been employed as surveyors and recorders and have been a success which is likely to grow with their experience. The total expenditure during the year was Rs. 2,77,072 distributed as follows :—

	Rs.	Cost per square mile. Rs.
Cadastral	1,13,357	133
Khanapuri	31,856	37
Office work	24,222	...
Bujharat	21,757	...
Supervision	50,746	...
Contingencies	35,134	...
Total ...	2,77,072	

The cost-rate for cadastral survey in Mymensingh includes expenditure in connection with the training of patwaris.

8. In the Collectorate settlements most of the work done has been in the Rajshahi Division, in all cases by officers of the district staff. In Rajshahi 17 estates, covering 16 square miles, were under settlement, 6 estates (14 square miles) under the Tenancy Act and 11 estates (2 square miles) under the Regulations. Of the area under Tenancy Act settlement the whole was traversed, but cadastral survey and khanapuri were completed in 3 square miles only. Settlements of four estates under the Regulations were completed. The expenditure from the Provincial Settlement Budget was Rs. 650 only. In Bogra one estate, with an area of 4·57 square miles, was under settlement under the Tenancy Act. The whole area was surveyed and khanapuried. The expenditure from the Provincial Settlement Budget was Rs. 408.

In Dinajpur eight private estates, covering 30 square miles, were under settlement, 12 square miles were cadastrally surveyed, khanapuri was completed in 20 square miles, 632 interests were attested and published in draft: the cost to the Provincial Settlement Budget was Rs. 8,230.

In Malda seven Government estates and temporarily-settled private estates, with an area of 21 square miles, were under settlement: proceedings in two estates, with an area of 16·54 square miles, were completed and fair progress was made in the others: the cost to the Provincial Settlement Budget was Rs. 713.

In Pabna 30 estates were under resettlement, 10 under the Tenancy Act and 20 under the Regulations: settlement in 6 estates has been completed and satisfactory progress has been made in the remainder: the cost to the Provincial Settlement Budget was Rs. 2,182.

In the Chittagong Division a good deal of important work was done in the Noakhali district where a Special Assistant Settlement Officer was in charge. Twelve estates (7 Government and 5 private) were under settlement, and a heavy programme was for the most part carried through. The increase to revenue has been satisfactory, and appeals against the rent rolls have been few. The cost to the Provincial Settlement Budget was Rs. 15,675.

9. The resettlement work done during the year in Assam has been shown in Appendix E. The final report of the Nowgong resettlement which had been completed in the previous year was submitted this year. The Darrang resettlement was completed during the year and the final report is under preparation. Operations in Lakhimpur began in November 1908, the district being divided into two blocks. In block A, which comprises the whole of the North Lakhimpur subdivision and of the Dibrugarh circle, map revision, record-writing and soil classification were completed. The resettlement of Lakhimpur will conclude the resettlement work of the Assam Valley with the exception of the Eastern Duars in Goalpara. In Lakhimpur the principles of soil classification have been made much simpler than those adopted in preceding resettlements.

10. Extension surveys were carried out in most of the districts of Assam. When a new cadastral village is constituted for the first time in a non-cadastral area, and is brought under survey by a village-recorder, the operation is known as "extension survey." The survey of new fields within existing cadastral villages is not treated as "extension survey." The work of extension survey can be undertaken both in districts which are under resettlement and in districts which are not under resettlement. Particulars of this work for the year under report will be found in Appendix F. The greatest amount of extension survey was carried out in the district of Lakhimpur, which is under resettlement.

11. Appendix G shows the mutations recorded during the year in both parts of the province, and Appendices H and I give the results of the inspections of survey marks. The experiment of tree-planting to facilitate the identification of survey marks has not so far proved an unqualified success in Eastern Bengal, but has as yet hardly had a fair trial.

PART II.

GENERAL.

12. The District Judges of Eastern Bengal were asked to report regarding the practical working of section 147B and section 148 of the amended Tenancy Act. Some interesting replies have been received.

In Bakarganj, Mr. Cargill reports that the only difficulty which has been felt is that in some rent suits the plaintiffs still fail, in the first instance, to supply the recorded particulars as required by section 148. The District Judge notes that this causes some delay; but I gather that the courts insist on the amendment of the plaints, and I have no doubt that, as the law becomes more widely known, the necessary particulars will soon be entered as a matter of course. The Judge adds that due consideration is given to entries in the record-of-rights and that full reasons are set forth in the judgment whenever the civil court sees reason to differ from the record.

The District Judge of Rangpur brings to notice a case in which owing to a series of misunderstandings on the part of a Zamindar, a Munsif and a Deputy Collector, several rent suits in a surveyed area were admitted without the necessary particulars. The District Judge, in consultation with the District Collector, is taking steps to avoid such misunderstandings in future.

The District Judge of Noakhali points out that the Civil Courts are often unaware, at the time when the plaint is filed, that the area in question has been surveyed and settled. He suggests that lists of surveyed and settled areas should be sent to the District Judge. I propose to adopt this suggestion in all districts which have partial records.

13. The new Government Rules under the Tenancy Act have (*a*) more clearly defined the powers of the various grades of officers, (*b*) have given to the Director the original powers of a Settlement Officer and have made him the confirming authority under section 104B (4) and the superior revenue or appellate authority under section 104G (1), thus transferring to him appeals which would otherwise have been heard by the Commissioners, and (*c*) have simplified the publication of the record.

14. The permanent Director (Mr. Beatson Bell), who was on leave from the 5th May to the 4th November, is now engaged on special duty preparing a scheme for the maintenance of the record-of-rights in the Eastern Bengal districts.

15. A draft revision of the Survey and Settlement Manual for Eastern Bengal has been prepared by Rai Pyari Mohan Basu Bahadur, and is now under consideration.

16. The scheme for printing the record-of-rights in Eastern Bengal prepared by Mr. J. C. Jack, Settlement Officer of Faridpur, has been sanctioned by the Government of India and indents are now being prepared for plant.

17. A proposal for the constitution of a regular graded service of Kanungos in the Eastern Bengal districts has been submitted but has not yet been sanctioned.

18. In Assam a scheme for improving the status of the mandals is under consideration.

19. The rules drawn up last year for the training of junior officers in survey and settlement have been given force to during the year. A camp was formed at Jamalpur in Mymensingh in December 1908, and lasted for three months: Civilians, Deputy Collectors and Sub-Deputy Collectors received a practical training. During the recess between the 15th May and the 15th August 19 Sub-Deputy Collectors, in three batches, were given a month's training in survey work.

20. Ten Munsifs were on deputation during the year for settlement training, four on the Faridpur-Bakarganj staff, four on the Jalpaiguri staff and two on the Mymensingh staff.

21. Mr. Beatson Bell submitted a full report to the Board on the subject of limiting expenditure in survey and settlement proceedings (letter No. 122—923T., dated the 4th May 1909). I understand that his proposals are still under consideration. Meanwhile I submit, for the information of the Board, the following figures showing the cost-rate per square mile in respect of the earlier stages of work in the three blocks of Faridpur :—

	A.	B.	C.
Cadastral survey	139	125	97
Khanapuri	48	46	50
Initial recess	22	24	21
Total	209	195	168

These figures show a distinct improvement in the direction of general economy.

22. As regards the merits of officers, I need not refer to the work done by the Settlement Officers—Messrs. Jack, McSwiney, Milne, Milligan and Sachse.

The Department has suffered a severe loss in the untimely death of Mr. Oddie. Of the Deputy Collectors I have again to call attention to the good work done by Maulvi Muhammad Abdul Momen in Mymensingh. I wish also to note the valuable services of Babu Har Kishore Biswas in Bakarganj and of Srijut Hem Chandra Goswami in the winding up of the resettlement operations in Darrang.

I have the honour to be,

SIR,

Your most obedient Servant,

F. P. DIXON,

Offg. Director of Land Records,
Eastern Bengal and Assam.

APPENDIX A.

"Permanently settled" in this table includes "Revenue free."

Districts.	Classification of district area. (Square miles.)			Area for which a cadastral survey and record-of-rights are complete. (Square miles).			Area for which a cadastral survey and record-of-rights were being prepared in 1908-09. (Square miles.)			Area outstanding. (Square miles.)			Remarks.
	Permanently settled.	Not permanently settled.	Total.	Permanently settled.	Not permanently settled.	Total.	Permanently settled.	Not permanently settled.	Total.	Permanently settled.	Not permanently settled.	Total.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Dacca	2,656	126	2,782	95	9	104	...	...	...	2,561	117	2,678	
Mymensingh ...	6,107	225	6,332	95	36	131	868	44	912	5,144	145	5,289	
Faridpur	2,390	195	2,585	...	...	...	2,390	195	2,585	...	...	...	
Bakarganj	2,272	1,478	3,750	2,272	1,426	3,698	...	52	52	...	...	...	
Chittagong	713	1,364	2,077	713	1,136	1,849	...	...	...	...	228	228	
Tippera	2,363	136	2,499	735	123	858	...	...	...	1,628	13	1,641	
Noakhali	1,460	184	1,644	349	123	472	...	53	53	1,111	8	1,119	
Rajshahi	2,564	29	2,593	59	9	68	3	11	14	2,502	9	2,511	
Dinajpur	3,946	...	3,946	495	...	495	22	...	22	3,429	...	3,429	
Jalpaiguri	1,000	1,960	2,960	...	...	...	500	1,162	1,662	500	798	1,298	
Rangpur	3,486	6	3,492	106	...	106	...	...	...	3,380	6	3,386	
Bogra	1,319	40	1,359	8	40	48	5	...	5	1,306	...	1,306	
Pabna	1,497	342	1,839	8	26	34	3	1	4	1,486	315	1,801	
Malda	1,860	39	1,899	86	...	86	...	5	5	1,774	34	1,808	
Total Eastern Bengal districts.	33,633	6,124	39,757	5,021	2,928	7,949	3,791	1,523	5,314	24,821	1,673	26,494	
Cachar	2	3,767	3,769	2	1,046	1,048	...	...	...	...	2,721	2,721	
Sylhet	3,825	1,555	5,380	...	805	805	...	...	...	3,825	750	4,575	
Goalpara	2,528	1,433	3,961	...	306	306	...	...	...	2,528	1,127	3,655	
Kamrup	53	3,805	3,858	53	2,173	2,226	...	...	...	...	1,632	1,632	
Darrang	8	3,398	3,406	8	1,197	1,205	...	...	...	...	2,201	2,201	
Nowgong	4	3,800	3,804	4	1,124	1,128	...	...	...	...	2,676	2,676	
Sibsagar	62	4,934	4,996	62	1,786	1,848	...	...	...	...	3,148	3,148	
Lakhimpur	3	4,204	4,207	3	591	594	...	...	...	...	3,613	3,613	
Garo Hills	...	3,140	3,140	...	33	33	...	...	...	...	3,107	3,107	
Total Assam districts ...	6,485	30,036	36,503	132	9,061	9,193	...	...	...	6,353	20,975	27,330	

APPENDIX B.

General Progress of Survey and Settlement in Eastern Bengal for the year ending 30th September 1909.

	Name of district.	Traverse survey by settlement parties. (Square miles).		Cadastral survey by settlement parties. (Square miles).		Khanapuri. (Square miles).		Attestation (interests).		Draft publication (interests).		Objection under section 103A.		Final publication (interests).		Recovery of costs.		Expenditure during the year.	Remarks.
		Programme.	Work done.	Programme.	Work done.	Programme.	Work done.	Programme.	Work done.	Programme.	Work done.	Cases for disposal.	Cases disposed of.	Programme.	Work done.	Amount for realisation.	Amount realised.		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
																Rs.	Rs.	Rs.	
Imperial Settlements.	Bakarganj	...	...	51	51	52	52	16,217	16,217	16,217	441	...	...	331,517	291,570	3,14,268	1,95,009	1,76,858	
	Faridpur	...	...	1,082	1,082	1,082	1,051	394,503	394,503	394,503	368,758	20,510	4,907	...	...	...	...	4,25,197	
	Jalpaiguri	...	...	700	700	420	420	50,000	50,000	50,000	50,000	5,690	1,757	...	...	...	...	2,81,175	
	Mymensingh	...	...	847	847	847	847	1,432	1,432	...	...	...	...	...	...	...	...	2,77,072	
Collectorate Settlements.	Noakhali	29	26	29	26	29	26	2,737	2,737	2,737	2,737	139	139	7,204	5,896	...	...	15,675	
	Rajshahi	14	14	14	3	14	3	470	70	350	...	...	...	350	...	...	...	947	
	Dinajpur	...	...	12	12	20	20	632	632	632	632	24	24	632	...	...	...	408	
	Bogra	...	...	...	...	5	5	...	...	...	...	...	...	...	...	...	...	...	
	Pabna	2	2	2	2	3	3	2,292	2,292	986	986	135	...	2,291	1,382	...	...	2,182	
	Malda	1	1	1	1	4	1	287	255	287	255	...	...	...	...	...	...	713	

APPENDIX C.

Judicial work by Revenue Officers in Eastern Bengal for the year ending the 30th September 1909.

Name of district.	Suits under section 105.								Suits under section 106.							
	Cases for disposal.	Cases disposed of.	Appeals to Special Judge.						Cases for disposal.	Cases disposed of.	Appeals to Special Judge.					
			Appeals for disposal.	Appeals disposed of.	Result of appeals.						Appeals for disposal.	Appeals disposed of.	Result of appeals.			
					Decision upheld.	Decision modified.	Decision reversed.	Retrial ordered.					Decision upheld.	Decision modified.	Decision reversed.	Retrial ordered.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Bakarganj ...	15,267	13,875	676	28	7	19	2	...	7,302	7,135	140	31	27	1	3	...
Noakhali ...	1,881	1,335	913	483	148	181	154	...	302	292	61	45	29	5	11	...
Dinajpur ...	26	26	3	2	1	...	...	1	21	21	4	...	...	...	...	...
Pabna ...	30	8	19	1	1	...	...	...	114	78	31	...	...	...	...	...

APPENDIX D.

Progress in the Settlement of Land Revenue in Eastern Bengal during the year ending 30th September 1909.

Name of district.	Determination of tenant's rents.					Determination of revenue payable by proprietors in temporarily-settled estates.					Remarks.
	Number of rents for determination.	Number of rents determined.	Percentage of increase or decrease of rent determined in the case of			Number of estates for determination.	Number of estates determined.	Old jama payable to Government.	New jama.		
			Tenure-holders.	Raiyats.	Under-raiyats.				Raiyatwari assets.	Payable to Government.	
1	2	3	4	5	6	7	8	9	10	11	12
								Rs.	Rs.	Rs.	
Bakarganj ...	19,234	14,675	+31	+17	—4	62	17	7,413	15,307	10,648	
Noakhali ...	1,977	1,977	+57	+43	+39	2	1	652	832	583	
Rajshahi ...	107	107	...	+37	...	2	2	130	191	134	
Pabna ...	2,397	2,063	...	+8	...	10	8	1,437	2,173	1,512	
Malda ...	287	56	+221	...	...	4	...	...	...	...	In Malda effect was given to a compromise between a tenure-holder and his raiyats.

APPENDIX E.

Progress of Resettlement work in Assam during the year ending 30th September 1909.

Name of district.	Number of villages in which—				Expenditure during the year.	Remarks.
	Map and record corrected.	Soil classed.	Attestation completed.	Rate report submitted.		
1	2	3	4	5	6	7
					Rs.	
Darrang	...	...	...	484	38,305	The year's programme was completed.
Nowgong	...	...	...	...	5,877	The work of this settlement was completed in the previous year. Some expenditure was incurred for winding up.
Lakhimpur	457	457	...	...	40,917	The year's programme was practically completed.

APPENDIX F.

Progress of "Extension" Surveys in Assam for the year ending 30th September 1909.

Name of district.	Total area of district. (Square miles.)	Area surveyed cadastrally by professional party. (Square miles.)	Area surveyed in extension by village recorders.			Total area cadastrally surveyed. (Square miles.)	Remarks.
			Previously. (Square miles.)	During the year under report. (Square miles.)	Total. (Square miles.)		
1	2	3	4	5	6	7	8
Cachar	3,769	1,034	20	2	22	1,046	
Sylhet	5,330	545	250	10	260	805	
Goalpara	3,961	...	303	3	306	306	
Kamrup	3,858	1,966	260	...	260	2,226	
Darrang	3,406	857	348	...	348	1,205	
Nowgong	3,804	1,012	114	2	116	1,128	
Sibsagar	4,996	1,521	319	8	327	1,848	
Lakhimpur	4,207	269	239	86	325	594	
Garo Hills	3,140	...	30	3	33	33	

APPENDIX G.

Maintenance of the Record during the year ending the 30th September 1909 (whole province).

Name of district.	Numbers of tenancies or periodic pattas in area dealt with.	Number of mutations recorded.			Percentage of column 5 on column 2.	Remarks.
		By formal procedure (Assam).	By summary procedure (Assam).	Total.		
1	2	3	4	5	6	7
		EASTERN BENGAL.				
Dacca (Government estates) ...	6,310	...	...	254	0·9	
Mymensingh (Government estates) ...	6,379	...	...	93	1·45	
Bakarganj ... Government estates ...	10,488	...	...	1,489	14	
Bakarganj ... Court of Wards ...	12,807	...	...	3,169	25	
Chittagong ... Government estates ...	93,278	...	...	2,289	2·45	
Chittagong ... Court of Wards ...	14,802	...	...	...	...	
Tippera ... Government estates ...	10,850	...	...	745	6·66	
Tippera ... Court of Wards ...	72,060	...	...	4,791	6·64	
Noakhali (Government estates) ...	12,437	...	...	820	6·6	
Rajshahi (Government estates) ...	73	...	...	2	2·74	
Dinajpur (Court of Wards) ...	30,630	...	...	671	2·19	
Jalpaiguri (Government estates) ...	26,079	...	...	5,581	21·4	
Rangpur (Government estates) ...	41	...	...	3	7·31	
Bogra (Government estates) ...	7,525	...	...	333	4·5	
Pabna (Government estates) ...	24,073	...	...	125	0·52	
Malda (Government estates) ...	4,577	...	...	17	0·34	
		ASSAM.				
Cachar	50,900	1,131	11,028	12,159	23·88	
Sylhet	38,311	1,018	8,265	9,283	24·23	
Goalpara	1,265	25	...	25	2	
Kamrup	125,771	1,347	4,198	5,545	4·41	
Darrang	...	...	...	...	...	Districts under resettlement.
Nowgong	...	...	...	...	...	Districts under resettlement.
Sibsagar	144,529	2,206	6,655	8,861	6	
Lakhimpur	...	...	...	...	...	District under resettlement.

APPENDIX H.

Condition of survey marks in Assam during the year ending the 30th September 1909.

No.	Classification.	Total number of marks.	Total number found in good order.	Number found not in good order.		Total of columns 4 and 5 in good order on 1st October 1909.	Number lost or left unvisited.
				Repaired.	Not repaired.		
1	2	3	4	5	6	7	8
1	Trijunction prisms	15,108	13,925	523	238	14,448	422
2	Traverse stations shown by mounds and boughs	51,827	29,244	11,169	5,773	40,413	5,641
3	Kanungos' mounds, including jungle mounds	14,099	10,210	2,794	693	13,004	402
4	Country stones on theodolite stations	46,648	32,035	5,987	7,041	38,022	1,585
5	Prisms on boundaries of grants ...	6,198	6,078	77	20	6,150	28
6	Concrete blocks on ditto ...	14,603	10,179	315	60	14,494	49
7	Country stones on ditto ...	20,819	17,890	197	242	18,087	2,490
8	Mounds on ditto ...	1,839	1,694	30	107	1,724	8
9	Brick pillars on ditto ...	730	665	1	20	666	44
10	Iron posts	25	25	...	...	25	...
11	Brick pillars on town boundaries ...	122	118	...	4	118	...
12	Theodolite stations in towns shown by concrete blocks	73	73	...	...	73	...

APPENDIX I.

Result of inspection of survey marks in Eastern Bengal during the year ending the 30th September 1909.

Division and district.	Total number of estates surveyed under the Survey Act or Bengal Tenancy Act.	Total number of estates in which permanent boundary marks are erected.	Number of marks erected in the estates mentioned in column 3.	Number of marks inspected during the year under report.	Result of inspection of the marks shown in column 5.			Number of damaged or missing marks restored.	Cost of restoration and how met.	Result of prosecution, if any.
					Number in fair order.	Number damaged.	Number missing.			
1	2	3	4	5	6	7	8	9	10	11
Chittagong Division.				*Government Estates.*						
Chittagong	...	...	...	353	341	...	12	...	...	
Noakhali	12	11	183	115	115	...	...	...	...	
Rajshahi Division.										
Jalpaiguri	5	5	2,541	224	87	...	137	...	...	
Bogra	2	2	478	478	465	...	13	13	...	
Pabna	15	14	273	...	...	...	...	...	...	
Malda	21	21	242	124	109	...	15	3	...	
Dacca Division.				*Wards' Estates.*						
Bakarganj	8	3	1,096	1,063	1,039	17	7	...	...	
Rajshahi Division.										
Dinajpur ...	1	1	649	238	238	...	...	...	...	

BOARD OF REVENUE, EASTERN BENGAL AND ASSAM.

GROUP I-B.

SURVEY AND SETTLEMENT BRANCH.

No. 86 $\frac{S.\&S.}{G.}$

FROM

J. T. RANKIN, Esq., I.C.S.,
SECRETARY TO THE BOARD OF REVENUE,
EASTERN BENGAL AND ASSAM,

To

THE SECRETARY TO THE GOVERNMENT OF EASTERN BENGAL AND ASSAM, REVENUE DEPARTMENT.

Dated Dacca, the 16th February 1910.

SIR,

I AM directed to submit, for the information and orders of Government, the reports of the Superintendent, Provincial Surveys, Eastern Bengal and Assam, and the Director of Land Records, Eastern Bengal and Assam, on the survey and settlement operations in this province during the year ending the 30th September 1909.

The Hon'ble Mr. P. C. Lyon, C.S.I., I.C.S., Member in charge.

2. I am to explain that the delay in submission of the reports is partly due to the non-receipt of the Settlement Report till the 23rd December 1909, and partly to the time taken to correct the proofs. The report of the Superintendent, Provincial Surveys, was received on the 8th November 1909.

3. The Board's remarks on the two reports are enclosed.

I have the honour to be,

SIR,

Your most obedient Servant,

J. T. RANKIN,

Secretary to the Board of Revenue, Eastern Bengal and Assam.

BOARD'S REMARKS ON THE SURVEY AND SETTLEMENT REPORTS FOR THE SURVEY YEAR ENDING THE 30TH SEPTEMBER 1909.

I.—The Survey Report.

Paragraph 6.—The further delegation of powers to the Superintendent of Provincial Surveys and the final determination of his position and status are now under consideration.

Paragraph 7.—The proposals originally submitted by Captain Hirst in connection with the work of standard mapping require some modification in view of the arrangements that are being made to have this work done by the Topographical Survey Party, and the Board are awaiting a further communication on the subject.

Paragraph 8.—The draft Accounts Manual for the Survey Department has been received and has been forwarded to the Accountant-General for examination and criticism. It will be submitted to Government for approval on its return from the Accountant-General.

Paragraph 9 (*d*).—The Board have approved the proposals made by the Superintendent, Provincial Surveys, and have submitted them to Government.

Paragraph 9 (*e*).—It has been arranged that the offices at present in the occupation of the Public Works Secretariat in Shillong shall be handed over to the Superintendent, Provincial Surveys, for the accommodation of his office when the Secretariat moves down to Dacca.

Paragraph 12.—The question of the work done for other Departments of Government and for private parties in the Shillong Drawing Office has been considered by the Board, and rules on this subject have been incorporated in the draft Account Rules and will be submitted to Government in due course. The Board desire to express their complete agreement in the views enunciated by Captain Hirst on the subject of the co-operation of Departmental Officers with him to secure economy in the printing of maps, charts and plans.

Paragraph 13.—The question of the selection and the preparation of the paper to be used in this department is of great importance, and Captain Hirst has promised to consult some experts upon the subject in England during his leave. His further suggestions on this subject are awaited.

Paragraph 14.—The Board have the question of the comparison of the results of modern surveys with the maps on the scale of 4 inches to the mile, which were prepared during the Revenue Survey, under their consideration and are in correspondence with the Superintendent, Provincial Surveys, and the Settlement Department on the subject. There are some reasons why any general comparison of these maps may prove undesirable.

Paragraph 26.—The planting of trees to facilitate the identification of boundary marks in Eastern Bengal has not so far been very successful. The Board agree with the Superintendent, Provincial Surveys, that the co-operation of the people is necessary, and that it may prove difficult to obtain. The matter will be further considered, in communication with the Director of Land Records in the course of the present year.

Paragraphs 40 *and* 41.—The programme for *diara* survey in the past year was altogether exceptional, both in extent and in difficulty, and it is not likely to be repeated. There is, however, much force in the remarks recorded by the Superintendent, Provincial Surveys, on this subject.

Paragraphs 52 *to* 60.—The Board have read the report on this work with interest. They agree that work of the kind should be done by professional surveyors only, and will advise Divisional Commissioners accordingly.

Paragraph 61.—The Board invite the attention of Government to the remarks of the Superintendent, Provincial Surveys, on the excellent work done by Mr. Delaney and his establishment.

Paragraph 78.—The question of the evidence required in the Civil Courts to prove a map prepared by the officers of the Survey Department is under the consideration of the Board.

Paragraph 92.—The Board realise the importance of supplying the Drawing Office with a regular programme showing the demands that will be made in the matter of reproduction work during the following 12 months and have no doubt that the Director of Land Records will be ready to meet the wishes of the Superintendent, Provincial Surveys, in this respect.

General remarks.—The Board desire to acknowledge the admirable work done by Captain Hirst during the year in organising and directing the operations of his Department. His report is full and interesting.

II.—Settlement Report.

Paragraph 1.—The report was due to the Board on 15th November, but was not despatched till 23rd December. Two proofs were sent to Mr. Beatson Bell on tour, as he had many alterations to make, the report as forwarded in its original form by the Officiating Director being inadequate. This has resulted in considerable delay and the Board regret that they were thus prevented from submitting their remarks to Government at an earlier date.

Paragraphs 2 *and* 3.—Appendix D has been amplified in accordance with the wishes expressed by Government in its Resolution on the Report for 1907-08, while the figures in Appendix F have been explained in paragraph 10 of the report. The Board will ask the Director to shew the programme for the year, as well as the work accomplished, in Appendix E in future. The subject of cost rates has been dealt with by the Director of Land Records in a separate report in some detail, and fuller information as to the expenditure incurred in the course of the operations in progress will be found in the present report than in those submitted in previous years.

Paragraph 4.—The work in Bakarganj is practically completed. Only a little case work now remains and some recovery work. For the latter a staff of kanungos has been employed so as to avoid the harassment to the people which might follow if the small sums, which still remain unpaid, were realised under the ordinary certificate procedure.

Paragraph 5.—Satisfactory progress has been made in Faridpur and there has been a noticeable reduction in the cost of the work done.

Paragraph 6.—The programme for the year in Jalpaiguri was carried through with the exception of the disposal of objections under section 103A. The four questions of importance referred to in this paragraph are under the consideration of the Board.

Paragraph 7.—In Mymensingh also the work is well up to date. The high cost rate for cadastral survey is due to the fact that the expenditure incurred upon the training of patwaris has been included in it. This expenditure will, however, reduce the cost in future years.

Paragraph 12.—The Board approve of Director of Land Records' proposal to supply District Judges with lists of surveyed and settled areas in all districts which have only been partially dealt with.

General remarks.—The Board invite the attention of Government to the comments made by the Director on the work of the officers serving under him. Mr. Jack has continued to supervise the difficult operations in Dacca with noticeable zeal and efficiency, and to Mr. Beatson Bell himself the Board's thanks are due for his admirable supervision of the operations of the Department.

Resolution on the Survey and Settlement Reports, Eastern Bengal and Assam, for the year ending the 30th September 1909.

Extract from the Proceedings of the Lieutenant-Governor of Eastern Bengal and Assam in the Revenue Department, No. 643R., dated 21st the March 1910.

READ—

The Survey and Settlement Reports for the year ending the 30th September 1909, and the remarks recorded thereon by the Board of Revenue.

RESOLUTION.

Date of submission of Report.

The Survey Report was submitted to the Board of Revenue with punctuality, but the Settlement Report was held back for revision by Mr. Beatson-Bell, the permanent Director of Land Records, on his return from leave, and did not reach the Board in its final form till after the commencement of the Christmas holidays. The Board's covering remarks, which were due to Government on January 1st, did not leave the Press till the 16th February, the day after the reports were due to the Government of India. The Lieutenant-Governor hopes that arrangements will be made by the Board for the more punctual submission of the report in future.

Re-organization of Survey Department.

2. The sanction of the Secretary of State to the formation of a separate Survey service for the province under a Provincial Superintendent was received in February 1909, and though careful preliminary arrangements had been made, the work of organization entailed considerable labour on the Superintendent and the Board of Revenue. Captain Hirst was, however, equal to the occasion and his field programme was carried out with entire success. A desirable economy was effected in the working of the Reproduction Office by a reduction in the number of colours used for illustration, without detriment to the utility of the maps, and Departmental officers requiring coloured maps will in future be requested to consult the Superintendent of Provincial Surveys as to the most economical way in which their object can be attained. The office was able to cope with all demands, in spite of a regrettable delay in the receipt of the new machinery from England. A fireproof record room has been constructed for the custody of the more valuable maps and Survey records, and the desirability of applying for the transfer from Calcutta to Shillong of the revenue survey maps of this province is under consideration. There has been some delay in the introduction of a simplified system of accounts for the department, but a scheme has been devised by the Superintendent and is now under examination by the Accountant General. The question of the preparation and maintenance of Thana Maps throughout the province also still awaits final decision.

Map paper and survey marks.

3. The deterioration through local climatic influences of the paper now in use for printing the cadastral maps is a serious difficulty which fully deserves the attention it is receiving. His Honour awaits a report on the inquiries into this subject now being prosecuted in Egypt and England, and also on the plotting machine employed in the Revenue Surveys of the former country. Captain Hirst points out the difficulties that are likely to be experienced in introducing into a densely populated country like Eastern Bengal, the system of demarcating survey marks by growing trees. These difficulties cannot be ignored, but it should be possible to devise some scheme to prevent the trees doing injury to cultivation as they grow.

Boundary surveys.

4. During the year, satisfactory progress was made with the re-demarcation of the boundaries between Jalpaiguri and Bhutan, and Goalpara and the Garo Hills. A prominent item in the year's programme was the relaying of the boundary between the permanently-settled district of Goalpara and the temporarily-settled district of Kamrup, with reference to alternative maps of 1849-53 and 1873-74. Much of the country through which the line runs is covered with dense jungle, and the work was such as could not with safety be entrusted to any but professional surveyors.

The Superintendent of Provincial Surveys has deprecated the inclusion of large riverain or diara areas in the programme of a single year. The Lieutenant-Governor acknowledges the difficulty of these operations. but an accurate map and record of the Faridpur district would have been impracticable without simultaneous operations along the whole coast line, and the advantages of dealing with both banks of a large river like the Padma at one time are very great.

Settlements.

5. The programme of major settlements was curtailed by the restriction of operations in Dacca to the riverain area, but the remainder of the programme was carried out successfully. In Eastern Bengal good progress was made with the major settlements in Jalpaiguri and Mymensingh and with the minor operations in other districts. No explanation has, however, been offered for the failure in Rajshahi to complete the cadastral survey and *khanapuri* (writing of the preliminary record) of more than three square miles out of the fourteen taken up by the district staff.

In Assam the final report of the Nowgong re-settlement has been received and operations in Darrang are complete except for the report. The Lieutenant-Governor was glad to learn from an address submitted by the Reception Committee at Mangaldai that they appreciated the fair and equitable settlement made in that subdivision. The settlement of Lakhimpur has made satisfactory progress and work has been facilitated by the simplification of the rules for soil classification. Proposals for the improvement of the status of Mandals in Assam are under consideration.

During the year Government issued new Rules under the Bengal Tenancy Act the main feature of which is the recognition of the position of the Director of Land Records in the chain of settlement officials and his substitution for the Commissioner as the confirming and appellate authority in matters pertaining to the settlement rent-roll. Sanction has been received to the printing of the record-of-rights in Eastern Bengal and a scheme to provide for its maintenance is under consideration.

The detailed information regarding settlement expenditure which was called for in last year's resolution has not yet been received. The Lieutenant-Governor understands that the Director of Land Records exercises a close personal check over the cost of the operations, but further information should be furnished in his report.

Conduct of officers.

6. The thanks of Government are due to Captain Hirst for his interesting report and for the energy and zeal with which he has thrown himself into the difficult task of organizing his department. The Lieutenant-Governor has also read with pleasure the names of the officers serving under him who have been selected for special commendation. The major settlements have all been conducted with thoroughness and efficiency, and the names of the officers mentioned by the Director of Land Records will be noted in the Appointment Department. Mr. Beatson-Bell continued to administer his department to the complete satisfaction of the Lieutenant-Governor, and when he went on leave, his work was ably carried on by Mr. Dixon.

ORDER.—Ordered that this Resolution be published in the *Eastern Bengal and Assam Gazette*, and that a copy of it, with copy of each of the two reports, be submitted to the Government of India.

By order of the Lieutenant-Governor,

B. C. ALLEN,

Offg. Secretary to the Government of Eastern Bengal and Assam.

E. B. & A. G. P. (J. & G.) No. 213—375—24-3-1910—J. M. R.

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